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# AMERICAN CINEMATOGRAPHER

THE MOTION PICTURE CAMERA MAGAZINE



November, 1937



Published in Hollywood  
by  
American Society  
of Cinematographers



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# BELL & HOWELL

# AMERICAN CINEMATOGRAPHER

A Technical and Educational publication  
on motion picture photography.

Published monthly by the  
AMERICAN SOCIETY  
OF CINEMATOGRAPHERS, INC.  
1782 N. Orange Drive  
Hollywood, California

Telephone GRanite 2135

VICTOR MILNER, President.  
FRED W. JACKMAN, Treasurer.

Vol. 18

November, 1937

No. 11



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ESTABLISHED 1920. Advertising Rates on application. Subscription: U. S., \$2.50 a year; Canada, \$3.50 a year; Foreign \$3.50 a year. Single copies, 25c; back numbers, 30c. Foreign single copies, 35c; back numbers, 40c. COPYRIGHT, 1937, by American Society of Cinematographers, Inc.

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# FROST IS ON THE PUNKIN'

By GEORGE BLAISDELL

**Y**OU who are exceedingly keen on good photography; who at least are as strongly an admirer of wild mountain background; you, too, who are particularly impressed with the brilliant color of photography when the exposure has been made in a higher altitude or even in latitudes that to southerners rate as northern—to all of these we say take a peek at Paramount's "Thunder Trail."

The picture seemingly was made in the general neighborhood of the Big Bear country, in the southern half of California, and in an average altitude above six thousand feet. At the opening of the subject the photographic addict is suddenly aware of the fact he is seeing something out of the usual.

Karl Struss, A.S.C., directed the photography on this Zane Grey story. In other days it was a custom not unknown among reviewers sometimes when a picture wobbled in its dramatic knees leniently to remark if in the mood that "The photography was excellent."

The custom is outmoded, for several sufficient reasons. One among these is that the photography on the screen is expected to be good. There is no sufficient reason as a rule why it should not be. Then again the quoted remark long since has been damned as the faintest of faint praise.

In the present instance the good word is due in common justice—and then again also in the present instance there is a strong story excellently portrayed.

"Thunder Trail" is one to put in the book—to catch it when it enters your neighborhood.

**G**EUNE realism comes to the screen in Paramount's "Ebb Tide." This is a Technicolor subject. In the course of the story of strange proceedings in the South Seas a big cargo-carrying schooner commanded by a captain temporarily drunk is caught in a typhoon. Things happen fast and ferociously.

It is in sequences like this that the craftsmanship described on the credit screen as "special photographic effects" makes possible the filmed reproduction of the ravages of wind and wave. Yet palpably in spite of the benevolent influence of life-saving devices there remains plenty of hazard to life and limb.

To Gordon Jennings, A.S.C., fell the creation of this reproduction of the assault of Old Nature on a crippled sailing vessel. It is a thrilling part

of an absorbing story seemingly more masculine in its appeal than it is for womankind. But as to that only theatrical showings will tell.

**T**HAT was an unusual experience enjoyed by the members of the Paramount Movie Club on the evening of October 7. A full-fledged studio cameraman stepped up to the 16mm. projector and with a double turntable to aid him in providing atmosphere accompaniment proceeded to unreel a Kodacolor picture exposed in and around Tahiti.

Charles G. Clarke, A.S.C., had photographed it in 1935 at odd moments during the stay in the South Seas of the troupe producing "Mutiny on the Bounty." Quite naturally into the making of the subject had gone the same quality of workmanship that marks the film passing under his hand that is designed for the theatrical screen.

Holding the film within the realm of the amateur were the typewritten titles—amateur incidentally only in the manner of presentation; certainly not in the phrasing. The photographer who turned projectionist and turntable operator also at times became commentator, and amplified the titles with remarks giving additional details of the beckoning South Seas.

Of unusual interest were the close-ups of the island flowers in all the glory of their rich colorings; of the many colored tropical fish, whether shown in full freedom of unimpeded motion or piled on the beach at the conclusion of one of the spectacular fish drives, participated in by three thousand natives.

The novelty of the situation for the members of the club was materially lessened by the fact they are studio employees and accustomed to the atmosphere of professional picture-making. Nevertheless to them the occasion was unusual.

In Los Angeles are many professional cameramen who own and operate sub-standard equipment. In it they find a lot of pleasure and through it in turn provide pleasure for their families and friends, and in instances like the one outlined here for strangers as well.

There is much these men may give to the members of the local clubs, much they may do to popularize still further their own craft. It is not unlikely that men who have made a recreation out of a craft would be willing to pass on to amateurs some of the pleasure they themselves have

found in creating a film library for their own families.

**T**HE tendency toward broader comedy is being remarked by those whose business it is to follow the new studio product. When in RKO's delightful comedy of "Breakfast for Two" Herbert Marshall was caused to do a backward fall there was lamentation on the part of some reviewers that he was out of his type. To be sure the leveling process rather inelegantly if accurately described by showmen was precipitated because of the presence on the floor of the ruins of a misdirected custard pie or its equivalent.

It may or may not be worthy of remark the projectile was catapulted by Barbara Stanwyck, but it must be conceded the aggravation measurably justified the unconventional procedure when surrounding and contributing circumstances are considered. Such things still are done in the best of families if we may believe what we read in the public prints.

And what is done in the best of families ought to serve as the best of yardsticks for those who are creating screen amusement whether for theatrical or home consumption. As for out of type, it has been maintained on the stage as far back as the days of Shakespeare that a good actor can with success take any part.

And it is the admiring opinion of this reporter that Herbert Marshall is as much at home in comedy as a duck is in water.

**T**HERE was an unusual occasion for amateur photographers here in Los Angeles and its neighboring city of Pasadena the latter part of October when the Pacific Geographic Society honored Mr. and Mrs. Harry Pearson by exhibiting their "African Holiday" in two of the biggest houses on the West Coast. In the Shrine Auditorium here every one of the more than sixty-two hundred seats available for screen showings was filled. The audiences perhaps were something apart from the usual theatrical house. For instance, one of the shots most applauded was that of Mount Stanley, which so far as known was the first time it had been photographed for the screen. It was a part of the agreement the couple should appear during the performance. They did. And they were made to feel at home when they came on the stage.



**M**OTION picture film is an important program vehicle in television. It enjoys several advantages over other types of pickup. Motion picture productions can be made in parts and the result edited. Motion picture programs can be released simultaneously in several remote cities, since any number of positive prints can be made from a master negative.

Alternately, in the interests of economy, one or two prints can be exhibited on a road show tour of the television outlets of the country, playing in one city on one date, in another city on the next, and so on.

Until suitable coaxial cables or television relay stations are networked across the country, film is the only means by which programs may be broadcast nationally, unless the cast and properties of the show themselves are transported from city to city.

Finally, it is impossible to distinguish between a live subject or a film pickup on the television receiver screen. If anything, a properly photographed film program is the better.

The Don Lee organization has been engaged in television research for seven years and in television broadcasting for six years. Television transmitter W6XAO went on the air on December 23, 1931, on the now universally used ultra-high frequencies, and has been on the air daily since that time.

#### Lot of Film

In this interval 8,000,000 feet of motion picture film have been broadcast. In May, 1936, television images were shown to the press on a self-synchronized cathode-ray television receiver in a transport airliner while flying over the city of Los Angeles.

In March, 1933, film scenes of the Long Beach earthquake were shown before the public was admitted to the stricken area. A football game has been flashed on the screen three hours after it was played, and a feature, "Empire of the West," was given a bona fide preview via television.

Public demonstrations of high definition television were inaugurated on June 4, 1936, and since that time 10,000 persons have witnessed the results at distances up to ten miles from the transmitter.

Early in this work it became evident that certain subjects, scenes and particular films gave excellent images on the receiver screen, while others gave almost worthless results. Constant observation of the transmissions under all sorts of conditions has resulted in the formulation of seven rules for good motion picture photography for television.

These are given below in the order of their

Top to bottom: Figs. 1, 2, 3, 4, 5, 6, 7, 8, 9. Reproduced from frames of the original motion picture films televised as described.

# FILM IS MOST VALUABLE IN TELEVISION

By HARRY R. LUBCKE

Director Television Don Lee Broadcasting System

importance, and the results obtained with subjects filmed in accordance with and in violation of the rules are given in the accompanying figures. These were received at a distance of  $3\frac{1}{2}$  miles on standard home receiving equipment.

The original is given at the left and the photographed reproduction at the right. The latter was taken with a Contax camera with an F 1.5 lens. With the range finder available and the fast lens, some of the photographs were not accurately in focus.

#### Eye Better Than Lens

In others a horizontal line structure appears because of secondary effects. This is not apparent to the eye when looking at the received image. A time exposure of from one to three seconds was used for the photographs.

Also for a few weeks at the time these photographs were taken a certain bypass condenser in the television amplifying equipment had, through an error, a value of two microfarads. This has since been changed to a proper value of eleven microfarads and the light as well as dark spurious shadows in certain scenes are no longer present.

It might appear that the photographic process used at the receiver to secure these records could be considered perfect. It has been consistently demonstrated, however, that this is not true, the image as seen by the eye having greater clarity and brilliance than it is possible to secure in the photographs.

The first rule is: Do not violate the usual rules of photography.

Illumination, composition, contrast, and exposure as required for clear pictorial definition are to be used. In current motion picture photography extremes in lighting and other factors are practiced for dramatic effect. Dark, low key, lighting is used to produce a depressing audience reaction to tragic sequences.

Such practices may be employed to a limited degree in the television technique, but they must be restricted, or the result on the receiver screen becomes meaningless.

Originals and photographed results are on file which are very dark and give results which are useless to reproduce here. Figure 1 shows a scene in which the key (overall) lighting is too low. This was part of a prisoner sequence where darkness was utilized as a depressing agent. Although the photograph of the received image was given five times

## Enjoys Number of Advantages Over Other Types of Pickup—Productions May Be Created in Parts and Results Edited

normal exposure the characters are poorly delineated.

Figure 2 illustrates a different condition, but with the same undesirable results. Here the object of interest is a well tanned man set in comparatively white surroundings. The receiver photograph shows that too much is lost because of the dark tone of the man.

In this case either the surroundings must be darkened by translucent screens or the object of interest brightened by light from a reflector or booster light, if outdoors; or the obvious changes made, if on a set. With costuming under control, the surrounding women could be dressed in figured dresses with an overall darker tone and the camera aperture increased to retain the required overall tone.

The second rule is: Carry detail in the halftones.

The object of principal interest must be thus portrayed. Figure 3 is an example of where the background is too light, forcing the principals into darkness. Figure 3 is the other extreme; the outline of the man in a black tuxedo is lost against the black background drapes. (In this scene, the man was moving when photographed).

The third rule is: Achieve "checkerboard contrast."

This is a form of composition in which, upon analysis, it is realized that the whole field of view is broken into alternate dark and light areas. The name originated because of the clarity with which a checkerboard was reproduced, as held on the laps of two convalescing soldiers in a scene early in our work.

It is not necessary that the various areas be of the same size or symmetrically distributed. Figure 4 shows a closeup which follows this criterion with folds and stripes of a flag in the background and consequently reproduces well.

Figure 5 shows the usual form that violations of this rule assume; a dark foreground and bright sky. The clear celluloid sky on this scene so overloaded the equipment that the general outline has been altered. Another violation of this is when everything is a monotone of gray. Such scenes reproduce poorly and have a depressing psychological effect.

Figure 6 shows a complicated long shot which reproduces well because of checkerboard contrast. The bridge, the pontoon boats,

the soldiers, shrubs and background trees all stand in contrast to one another over small areas.

Figure 7 shows an interior according to the criterion except for the lack of contrast between the man's tuxedo and the seat of the cafe booth. This could have been established by top lighting to highlight the outline of the tuxedo. It will be noted that most of the poor

examples used to illustrate other rules also lack checkerboard contrast.

The observance of the criterion of checkerboard contrast results in reproduced images which stand out in refreshing grandeur. The apparent detail often exceeds the capabilities of the system. The opposite, which might be termed "agglomeration," produces the depressing effect which has been mentioned.

The fourth rule is: Keep the overall gamma range small.

This rule is frequently violated in taking personage shots on shipboard, as in Figure 8. Here a dark figure has been secured with a "clear celluloid" background. Such extremes encounter overload points in the several units of the television chain from pickup device to receiver screen. The effect is similar to carrying the contrast to the toe and knee extremes of the H-D curve in photography.

### Maintain Action

Figure 9 shows a shot that was specially photographed for television. The contrast is definite from part to part, but the overall range is nominal.

The fifth rule is: Maintain action.

It is well established that the eye is used to reduce detail in objects in motion in real life. By the converse, scenes of limited detail, as in television, appear to be of greater clarity when in motion. Consequently, the principal characters should move, gesticulate, or talk whenever possible.

Certain short motionless periods may be observed to avoid monotonous repetition of motion. Also, background elements may be moved during otherwise still intervals: an extra walk by or an auto passes in exteriors, while the pendulum of a clock moves or a window curtain blows in the wind in interiors.

When inanimate objects are to be shown, motion of the camera can satisfy the rule. "Panning" is effective and desirable in scenic exteriors. Planning, "zooming," change of camera angle, or traveling shots all supply variety in interiors and also may be employed in many exteriors.

The illustrations cannot portray the motion

(Continued on Page 482)

**Top to bottom:** Figs. 1-A, 2-A, 3-A, 4-A, 5-A, 6-A, 7-A, 8-A, 9-A. The same scenes shown on the opposite page, as photographed on the screen of a television receiver 3½ miles from the broadcasting station.



**Shot during the filming of Samuel Goldwyn's  
new \$2,000,000 Technicolor spectacle,  
THE GOLDWYN FOLLIES**



*Producer: SAMUEL GOLDWYN  
Director: GEORGE MARSHALL  
Cameramen: GREGG TOLAND A.S.C.  
RAY RENNANAH  
Studio Chief Electrician:  
WILLIAM WHISLER  
Still by: ALEXANDER KAHLÉ*

## INKIES IN TECHNICOLOR

Thanks to new precision filters and the brighter, whiter light from G-E MAZDA lamps for color photography, the many advantages of "inkies," so well known in black-and-white cinematography, are now available for Technicolor.

THIS CLOSE-UP from Samuel Goldwyn's new Technicolor production, "The Goldwyn Follies," illustrates clearly

some important features provided by G-E MAZDA lamps:

1. *Constant color . . . and satisfactory color.*
2. *Silent operation.*
3. *No clutter on set. Note the room around the camera.*
4. *Lightness and portability of equipment.*

These advantages are also helpful for other types of color shots . . . as well as black-and-white.

*Are you benefitting fully from the versatility of G-E MAZDA lamps? General Electric Co., Nela Park, Cleveland, Ohio.*



**GENERAL  ELECTRIC**  
**MAZDA LAMPS**

# WHY '100 MEN AND A GIRL' MAKES A HIT ON SCREEN

**S**OUND recording, like cinematography, produces its greatest advances by a happy combination of opportunity and necessity. Every season manages to bring with it one outstanding musical production; and these often bring both the opportunity and the necessity for spectacular advances in recording.

Among such instances in the past may be recalled the productions the requirements of which first necessitated the use of hill-and-dale disk recording for musical sequences, the initial use of "push-pull" recording and reproduction, and similar achievements.

This year Universal's production "100 Men and a Girl" marks another such milestone in the advancement of sound. It is generally acclaimed the young season's outstanding musical production and termed as well by technicians the season's outstanding achievement in recording.

The requirements of the film necessitated, and production conditions permitted, an unusual number of noteworthy innovations in recording technique. In addition to the much publicized multiple-track recording of the orchestral numbers, as suggested by Dr. Leopold Stokowski, conductor of the Philadelphia Symphony Orchestra, the film is found to be probably the first major release including ex-

## Story of Variety of Methods Used in Recording of Music, Song and Speech in Universal's Fine Picture

amples of both of the two major systems of recording—Western Electric's Class A push-pull variable density and RCA-Photophone's Class A push-pull ultra-violet variable area.

In addition, certain sequences have for various reasons been rerecorded from one system to the other. It is a high tribute to Universal's Sound Supervisor Homer G. Tasker and Recording Engineer Bernard Brown that this has been accomplished with a smoothly flowing, homogeneous result.

### Studio Unit Goes East

"One Hundred Men and a Girl" is certainly not the first production in which symphonic music has figured importantly; but in this production symphonic music, as exemplified by the Philadelphia Symphony Orchestra, figures as an integral part of the dramatic action. Dr. Stokowski collaborated actively in the utilization and the actual recording of this music.

As a matter of production economy, it was decided to send the studio's unit to Philadelphia to record the music of this celebrated orchestra. Dr. Stokowski quite naturally desired to make use of the recording facilities of the RCA-Victor phonograph recording plant at Camden, N. J., where he and his orchestra had made so many successful gramophone disks.

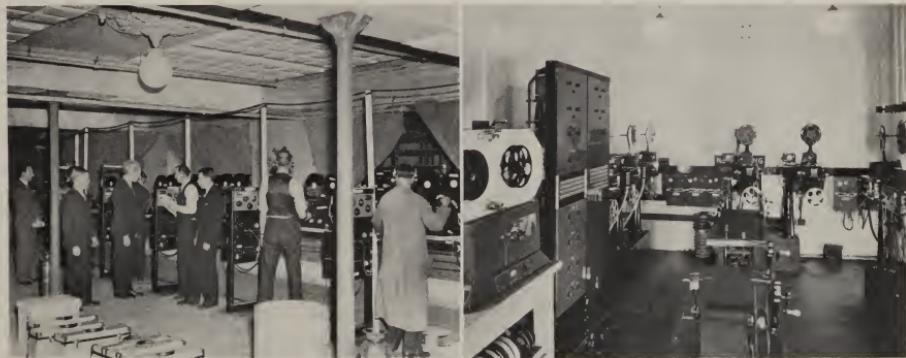
Since it was impracticable to assemble in Philadelphia the large number of Western Electric channels necessary to do this recording by the multiple-track methods Universal's engineers desired there was yet another reason for making use of RCA's ample facilities in suburban Camden.

The conventional method of recording such orchestral selections on film or wax, by any system, has been to employ a single microphone, or at most two, giving "long-shot" and "close-up" sound perspective.

For motion picture recording, a multiplicity of microphones has frequently been used, each recording some one section of the orchestra, and all feeding through a single mixing panel into a single recording channel, giving a conventional close-mix track.

This latter technique, it may be mentioned, while used in Hollywood, was unknown to the eastern record-

(Continued on Page 458)



Left—Dr. Leopold Stokowski inspecting the battery of eight RCA-Photophone Ultra-Violet push-pull recorders used to record the Philadelphia Symphony Orchestra for "100 Men and a Girl."

Right—Part of the battery of rerecording machines used for mixing the close-mixed and sectional tracks into a single finished track.

# KEG LITE WHEN TURNED ON WILL RUN ON ITS OWN

By CARL R. ERICKSON

**T**HE keynote of modern trends in motion picture lighting development has been simplification of operation. A lamp which can be placed on a set, swung into position and then forgotten, is the one which will impress itself upon the minds of those who use and handle it. Such has been the experience surrounding the increased use of Bardwell and McAlister's new streamline 2000-watt spot, the Keg-Lite.

Spun of 16-gauge sheet steel in the shape of a beer keg, this lamp offers a sturdiness of construction which defies the most unusual and rough treatment. Its lines are so shaped that heat expansion is uniform in all directions, making crackling or popping out of the question.

In addition, its ventilation has been designed to allow the lamp to run several degrees cooler than is ordinarily experienced with lamps of this wattage. This cooler running lamp also has eliminated warts or bulges from forming on the globe.

The lamp element itself claims many improvements in design. By reference to Figure 2, one can grasp a more concrete picture of their de-

tails. When the globe is inserted in its socket the contact tension is applied by a thumb screw at the back of the socket. This locks the globe simply and firmly in place and prevents any globe movement as the lamp is tilted up or down.

#### Always in Position

The method of mounting the back spherical reflecting mirror is also a departure from convention to the advantage of the lamp. The presence in the Keg-Lite of a firmly locked globe makes possible more refined adjustment of this spherical mirror.

The mirror frame is rigidly fastened against a shoulder in its base which prevents any twisting or misalignment. The base is then adjusted and firmly locked at the factory to bring the mirror to its proper focus.

This mirror then requires no additional adjustments at the studio or on the set. It is always in correct position ready for use. The mirror itself may be easily removed from this rigid frame in case it is desired to do so to soften the light or for placing a globe in the lamp. The mirror frame holds the correct position during this operation.

The lamp is focused by a patented quick focusing device which allows for a movement from spot to full flood with less than one-half complete turn of the focusing handle.

This is an indispensable feature for following running shots or dance scenes where quick change of spread is imperative.

The focusing handle is accompanied by a numered dial which makes it possible to set the lamp at any predetermined focus by the dial indicator.

#### Echelon Type Lens

Lamps of this type use what is known as a Fresnel type, or echelon type lens, to condense the light. This type of lens has the advantage of better controlling the light to give a more even spread than was possible with the old type plano-convex condenser lenses. It also can be designed with a much shorter focal



Figure 1. View of the Keg-Lite ready to go.

length for a given diameter than the older type.

This shortening of the focus presents a new problem, namely, an increase in the converging power of the lens necessary to bring this extra light into a parallel ray on spot position. In other words, the lens, enjoying a larger angular pickup of light, must bend these rays through a larger refracting angle in order to condense them into a parallel spot beam.

#### Reflecting Back

By reference to some principles of optics, the cause of spill light in such lenses can be determined. It is a known fact in optics that of any ray of light which hits a glass surface a portion of the ray is reflected back again instead of passing on through the glass.

In similar fashion, of the portion which does pass into the glass, a like amount is reflected back at the next surface where the ray is emerging from the glass to the air beyond. This reflection is approximately 4 per cent at each surface for normally incident light, i.e., light coming perpendicular to the face of the glass.

This amount of back reflection increases with departure of the angle of the ray with the perpendicular. At

(Continued on Page 462)



Figure 2. Simplified globe clamp and rigid mirror in Keg-Lite element.

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# PRODUCTION INSURANCE

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**PRODUCERS** need no longer rely upon approximate copies of original negatives. They can have true facsimiles, completely adequate for every purpose. Because the use of Eastman Fine-Grain Duplicating Films readily leads to duplicates that are actually indistinguishable from originals. Every production needs this insurance.

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(J. E. Brulatour, Inc., Distributors, Fort Lee, Chicago, Hollywood.)

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**EASTMAN *Fine-Grain***  
**DUPLICATING FILMS**

# ENGINEERS FALL MEET SHOWS STEADY GROWTH

**T**HE fall convention of the Society of Motion Picture Engineers was held at the Hotel Pennsylvania in New York from October 11 to 14. It started on the dot and through the four days of its duration ran close to schedule.

The convention paid attention particularly to three important subjects of the day—stereophony, stereoscopy and television. The subject of color was not included in the program aside from the showing of a few unusual subjects in 16mm. kodachrome, designed as a plan for enhancing the charm of the projected screen image by means of a specially constructed reflecting surface about the periphery of the screen.

The attendance maintained its steady increase in volume. The proportion of paid registrations was greater than at preceding conventions.

The convention opened at 10 a.m. Monday, October 11 with remarks by President Wolf, committee reports, a paper dealing with foreign film markets by N. D. Golden, and a discussion of technologic applications of motion pictures in designing telephone apparatus.

At noon the usual luncheon was held, attended by approximately 150 members and guests. The results of the Fall elections were announced.

#### Quigley Talks

Addresses were made by Martin Quigley on "Propaganda, Education, and the Entertainment Film." Louis Nizer, secretary of the New York Film Board of Trade, also addressed the convention.

The feature of the Monday afternoon program was the demonstration of stereoscopic motion pictures by G. W. Wheelwright, based upon the use of polaroid. The effect was demonstrated with 16mm. kodachrome pictures.

Monday evening's session was held in the auditorium of the Bell Telephone Laboratories and was devoted to developments in both disk and film recording and reproduction.

Papers on disk recording were by M. J. Di Toro, L Viet and C. F. Wiesbush; on 96-cycle frequency modulation of sound film records by J. I. Crabtree and W. Herriott and a discussion of various types of movietone releases by J. K. Hilliard.

A demonstration of stereophonic recording and reproduction was

#### Attention Paid to Trinity of Popular Subjects, Stereophony, Stereoscopy and Television, by Good Houses

made, based on the arrangement demonstrated by H. Fletcher several years ago.

#### Discuss Equipment

A special picture had been made and recorded so the spectators could follow the images upon the screen from which the sounds were supposed to come. The recording of this film was accomplished by a special four-ribbon light-valve.

The morning of Tuesday, October 12, was devoted to papers on air-conditioning and the use of various materials such as stainless steel and die castings in motion picture equipment.

In addition, a paper discussing the design and operation of vacuum tubes for use in motion picture processes was presented by L. C. Hollands and A. M. Glover.

Light and illumination was the keynote in the afternoon. F. T. Bowditch and A. C. Downes talked about carbon arcs, and the paper by S. Dushman dealt with recent developments in gaseous discharge lamps. G. G. Popovici described recent developments in background projection, and G. Mili those in light control in photography.

In the afternoon B. Schlanger discussed "A Method of Enlarging the Visual Field of the Motion Picture Screen." The scheme that was dem-

onstrated showed a special extension of the motion picture screen so shaped and curved that light reflected from the main portion of the screen bearing the projected image would fall upon it and relieve the usual impression that the image to be viewed lay solely within the confines of a black border about the periphery of the screen image.

As the brilliancy of the screen image would change, or, in the case of kodachrome, as the color would change, so would the brightness or hue of the screen extension change. The sharp unnatural black screen edge is avoided, and the effect that was produced could probably be aptly described as "luminous vignetting."

#### Report on Projection

The morning of Wednesday, October 13th, was given over to projection, including the report of the projection practice committee. The latter principally had to do with the change of projector aperture dimensions recently proposed by the Academy of Motion Picture Arts and Sciences. A symposium of several papers, arranged by Frank H. Richardson, dealt with problems encountered in projection. The morning closed with an open forum.

The afternoon of Wednesday was left open partly for those members who wished to inspect the projection facilities of Radio City Music Hall.

The semi-annual banquet and dance was held Wednesday evening. M. Doublier of Paris, representing the French Association of Cinematographers, talked briefly of his work with Lumière in France in the early days of the motion picture. H. G. Govil, representative of the motion Picture Society of India, spoke briefly of some of the motion picture problems in that country.

Following these addresses, C. C. Pettijohn, general counsel of the Motion Picture Producers and Distributors of America, made the principal address of the evening.

#### Dr. Judd Cited

A citation on the work of Dr. Dean Brewster Judd, who was selected as the recipient of the 1936 Journal Award, was next read by E. A. Willford, chairman of the Journal Award Committee.

The award was made to Dr. Judd in recognition of his paper on "Anom-

#### Fall Elections of the S. M. P. E.

Executive Vice President — K. F. Morgan

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Financial Vice President — E. A. Williford

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Treasurer — L. W. Davee

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alies of Vision and Color Blindness."

Honorable mention was made by Mr. Williford of two additional papers selected from the 1936 publications in the Journal, "Improved Resolution in Sound Recording and Printing by Use of Ultraviolet Light," by G. L. Dimmick, and "Continuous Photographic Processing" by H. G. Hineline.

The recipient of the Progress Medal for 1937 was Edward Washburn Kellogg, RCA Manufacturing Company. A citation of his work was read by E. W. Engstrom. The granting of the Award was followed by an address of acknowledgement and appreciation.

The morning session of Thursday was devoted to motion picture apparatus. The afternoon was devoted to sound and photography as listed in the final program.

#### Television Highlight

A highlight of the sessions was the television demonstration arranged by the Radio Corporation of America through Ralph Beal, director of research of RCA. The demonstration took place on the sixty-third floor of the RCA Building, New York. Twenty television receivers, each viewed by a group of ten or fifteen persons, picked up signals transmitted from the Empire State Building.

The program originated in an NBC studio on the third floor of the RCA Building, whence it was transmitted by way of coaxial cable to the transmitter in the Empire State Building and thence radiated back to the RCA Building. The program consisted of comedy and vaudeville sketches by live artists and the transmission of a motion picture film newsreel.

The proceedings opened with a brief address by David Sarnoff, president of the Radio Corporation of America, who was introduced by J. I. Crabtree, editorial vice president of the society.

#### Two Shows Given

Two performances were given, in order to accommodate the large number who attended. At the end of each performance an informal interview between one of the studio performers and a member of the society was televised and transmitted.

The general facilities of the convention were arranged by W. C. Kunzmann, convention vice president; H. Griffin and J. Frank, Jr., in charge of projection facilities; G. Friedl, Jr., chairman, local arrangements committee; A. S. Dickinson, chairman of the banquet committee; Mrs. S. K. Wolf and Mrs. O. F. Neu, hostesses; W. Whitmore, chairman publicity committee, and E. R. Geib, chairman membership committee.

• November, 1937

**'100 Men and a Girl'**

(Continued from Page 458)

ing experts, and at the time seemed impractical to them.

Neither the Universal sound engineers nor Dr. Stokowski, however, were at all satisfied with conventional methods of recording. Conventional methods, they agreed, would be fairly satisfactory for ordinary scoring or phonographic recording, where no question of shifting sound-and-sight perspective entered.

**Complications**

But for music to be synchronized to dramatically important scenes of the orchestra in action, where the action involved constant intercutting of long shots with closer angles of individual sections of the orchestra and

A long-shot like this requires one sound balance; close-ups of individual musicians, or of Conductor Stokowski, different sound perspective.

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even of individual players, the question of sound perspective became highly complicated, and definitely a thing impossible to control at the time of recording, so long before the film was to be edited.

Before the unit left Hollywood,

therefore, it was decided to experiment with a new method of recording, making separate tracks of each section of the orchestra. This involved not only the use of six microphones but also the use of six separate recording channels.

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Since this technique was primarily experimental, the microphone placements were duplicated, these second six microphones feeding into a single mixing panel for a conventional close-

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mixed recording on a single track. An eighth channel was used for a conventional long-shot microphone.

#### Real Achievement

It might be mentioned, incidentally, that Recording Engineer Brown had the advantage of but a single rehearsal—two, if one counts his presence at a concert the previous night—before mixing the close-mixed track on the actual take.

While this single, close-mix track was inferior to the ultimate rerecording from the multiple tracks, it was, as this writer can testify, none the less a magnificent recording achievement, for which Brown deserves the highest praise.

It may also be mentioned that while conventional recording generally involves considerable rearrangement of the positions of the various units of the orchestra, this multiple-track recording did not. The sections of the orchestra were arranged in their usual manner, in the way Dr. Stokowski had found most effective.

#### Separate Sections

The only departure from this was a slightly greater spatial separation of the sections from each other, in order that the individual records of each section might be the least influenced by adjoining instruments and by the orchestra as a whole.

The negative of these recordings was processed by Warner Brothers' East Coast Laboratory, since the eastern plant of Consolidated Film Industries (the west coast laboratory of which normally processes all Universal negative) was at the time closed by labor troubles.

With these recordings completed, the unit returned to Hollywood, as for various reasons it did not seem practical either directly to record Deanna Durbin's songs in Philadelphia, or to prescore any but the "Alleluia" for later use.

In Hollywood, Universal's Musical Director Charles Previn assembled another orchestra and recorded accompaniments for Miss Durbin's songs, as well as for the sequence in which the unemployed musicians play the "Zampa" Overture in the garage. The latter, too, was recorded with RCA Push-pull variable area recording.

#### Voice and Accompaniments Separate

With these recordings completed, the company proceeded, as one member put it, to "dismiss the overhead," closing out the orchestra members. The recording of Miss Durbin's songs was done by playing the accompaniment track to her, through earphones, as she sang, recording her voice as a separate track which was later

mixed with the accompaniment track in rerecording.

When the picture had been completed and edited Dr. Stokowski and Bernard Brown proceeded to rerecord the multiple tracks into a single composite track for use in the production. RCA push-pull rerecording channels were brought into the studio for the purpose.

Sitting in a projection room watching the projected picture on the screen, Stokowski and Brown mixed

the various sectional tracks and the single close-mixed track to form the ultimate recording. In general, the close-mixed track was used for a foundation; then as the action came to closer shots of any individual section or player, the volume of the desired sectional track was momentarily increased.

In rerecording Miss Durbin's rendition of the "Alleluia" it may be

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mentioned, the original Camden-made track of the accompaniment and the synchronizing Hollywood-made track of her voice were rerecorded to form a composite variable density track.

There were definite reasons for having the various sections of the film on these different types of recording.

#### Two Systems Retained

Three very definite volume range levels were necessary: a conventional range for dialog; a considerably greater range for Miss Durbin's songs; and the maximum possible range for the symphonic numbers. For obvious reasons, each had to be considerably in excess of the preceding one.

In actual fact, Mr. Tasker points out, the push-pull variable density

and variable area systems encompass a very closely comparable volume range in ratio of maximum signal volume to ground noise. However, variable area recording permits a 6 db. louder maximum signal.

Therefore the push-pull variable area method was retained for the symphonic numbers. On the other hand, push-pull variable density recording offered a considerable advantage in lessening ground noise at lower levels, and the track would be less affected by dirt and scratches, so it was chosen for the vocals; the accompaniments were rerecorded from a clean new variable area track to variable density.

This recording, in turn, gave an additional 6 db. gain over the

"squeezed" Western Electric track used for speech.

In the prints intended for theatres equipped with the most responsive modern reproducing equipment, a further gain of 2 or 3 db. was obtained by increasing the density of the sound-track printing, while for the lesser theatres the range was compressed within the smaller range of the equipment by reducing the density of the sound-track print.

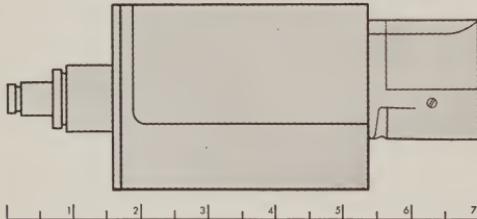
It may be mentioned that while the impression has been given by some publicity stories that the technique and equipment used in this multiple-track recording were developed specially for this production, Sound Supervisor Tasker states that while the technique was entirely new, the work was done on standard equipment.

In this connection the studio engineers, far from being followers of the technique of eastern laboratories, have actually shown these laboratories improved methods.

The RCA-Victor engineers, for example, were so pleased with the superior results of Brown's multiple-channel recordings of the orchestra that they have decided to standardize similar methods for all their symphonic recording.

#### Council Seeks Co-ordination

In response to a number of requests for a statement of the position of the Research Council of the Academy of Motion Picture Arts and Sciences regarding the divergence of technical opinion between the Council and the Society of Motion Picture Engineers, Major Nathan Levinson, vice chairman of the Council, states the Academy's original proposal of September 16 last, presenting specifications for a new standard projector aperture of increased dimensions over that now in use, was distributed throughout the industry in an effort to obtain a co-ordination of technical opinion on the present aperture dimensions and the advisability of a revision in the standard at this time.



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# A. S. C. MEMBERS ON PARADE

**John L. Herrmann, A.S.C., F.R.P.S., F.R.S.A.**, dropped into Los Angeles for a few days' vacation in mid-October and also to visit Mrs. Herrmann, who for two months has been with her mother in Long Beach. The new initials on the member's name is a recent honor bestowed by the Royal Society of Arts of England. During the past few weeks John also has received word that Secretary Swanson is forwarding him one of the fifty-six silver medals ordered by Congress last year to be bestowed on the members of the second Byrd antarctic expedition.

The newsreel veteran has had a varied assortment of assignments during the preceding year, headquartering from Christmas to April in Miami covering assignments on golf tournaments, etc., to later from Cleveland the steel strike, with tours in Johnstown, Pittsburgh, Arequipa, Youngstown, Massillon, Cleveland, Monroe, Mich.; Indiana Harbor, Ind., and Army Flying Corps at Dayton and army manoeuvres at Fort Sam Houston, San Antonio, Texas.

The cameraman felt very strongly the tragic deaths of James Pergola and William Pitt in the plane crash in Utah. He had worked with the former at the gold cup race in Detroit Labor Day, while with Pitt he was in constant touch all spring in Miami. Here Pitt as news editor had been contact man between the hotels and newsreels. From this work he had retired but four months before to take up the work with Pathé in which he met his death.

The visitor reported Ariel Vargas, A.S.C., now with the Hearst forces in

Chicago, crying for an assignment to China. The stormy petrel of newsreelers cannot be contented to be in a land of peace so long as there is war on the face of the earth.

Some of the newsreelers in the midwest thought at times during the steel strike in recent months they were carrying on in a state of war.

Several of them were gassed, one so badly he was unable to see with sufficient clarity to drive a car.

Asked as to how the newsreelers made out on trying to record the news and remain at peace with both sides in such bitter controversies the answer was returned that it was necessary for the cameraman to have on tap their union cards and police passes.

In the rubber strike of a year earlier there were no disorders, but old man Zero was in evidence. Another experience was reporting the drilling of the mid-town tunnel in New York.

(Continued on Page 485)

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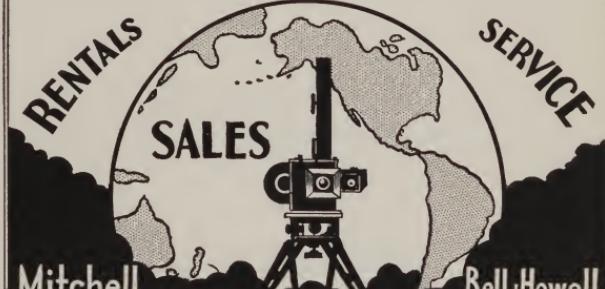
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### Keg Lite Runs On Its Own

(Continued on Page 454)

the first or incident surface there always will be a portion of the light which will enter the glass regardless of the angle. However, at the second

or emerging surface, where the light is going from the glass back to air again, this law does not hold.

The percentage of light reflected back into the glass increases rapidly with the increase of the angle, until when the light is at an angle of 42 degrees with the perpendicular, all

the light is reflected back and a condition known as total reflection has been established in the glass. This condition is easily obtained in a prism where the sides of the glass are not parallel.

### Near Total Reflection

This situation is applicable to the Fresnel type lens. Each zone or segment can be thought of as a portion of a prism. A cross section of such a lens is shown in Figure 3. The front prism faces are each calculated to throw light in a certain portion of the field.

Now, the outer zones or prisms have to bend their rays so far that the light is perilously close to the condition of total reflection at the front surface when the lens is used in spot position as shown in Figure 3A.

Hence a large part of the light is reflected back and takes the path indicated by the dotted lines. Some of this light gets past the other projecting prisms and the front of the lamp housing and scatters to the side. This is known in the industry as spill light.

Heretofore the only means of combating this spill light was by the use of blenders to nigger it off. This is an awkward and unsatisfactory method

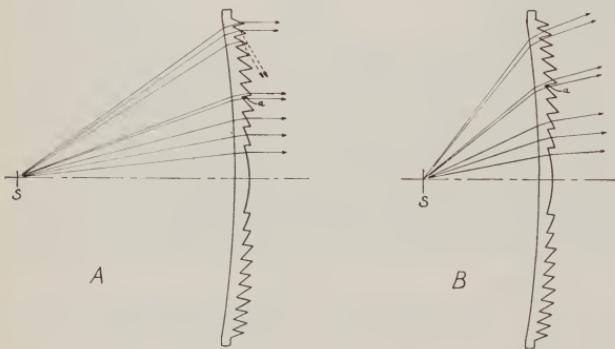


Figure 3. Cross sectional view of Leaking Proof lens. (A) Light source at spot position and (B) light source at flood position.

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since complete niggering is practically impossible without detracting from the main light beam.

The manufacturers of the Keg-Lite recognized this problem, and determined to design a lens which would better cope with spill light. The result is a new lens, designed in Hollywood by their own engineering department.

This lens aims to kill spill light by stopping such light within itself. This is accomplished by painting the under surfaces of the prisms with a heat-proof paint which is fused into the glass itself.

As shown in Figure 3, this painted surface is directly in the path of the spill light and prevents its emergence from the lens. This effect is most noticeable by lighting a Keg-Lite and looking sideways into the lens. No glare of light is picked up by the eye outside the main beam.

In fact, so satisfactorily is the spill light eliminated, that the lens looks "dead," as though the lamp were not burning.

#### No Stoppage of Rays

Some cameramen have asked if this painting does not cut off some of the light projected by the lens into the field. An examination of Figure 3, comparing the paths of light rays through the lens at both spot and flood extremes, will show that there is no stoppage of useful light rays.

The angles of these cut-off surfaces between the prisms have been carefully chosen, keeping this question in mind. Fixing attention on point "a" in either diagram, one can see that around a given painted surface all available rays are allowed to pass to the field without any interference from this opaque surface.

The characteristics of the light field from this lens are a flat flood field, slightly soft on the edges for blending, and an intense spot devoid of filament image. To further utilize this light a new, wider standard has been set for diffuser brackets on the front of the Keg-Lite which allows diffuser frames of 10 inches inside

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diameter to be placed before the lens, which diameter being that of the lens itself.

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The value of the motion picture in educational and interpretive publicity is described by Raymond C. Mayer,

author of "How To Do Publicity," published in revised form by Harper & Brothers.

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# ARNOLD GIVEN GOLD LIFE CARD BY A. S. C.

THE A.S.C.'s month end party for October was the highspot of the series for the year. Treasurer Fred W. Jackman had been delegated as chairman of the evening, and in order to give wider scope to his plans for the entertainment of his fellow-members he had invited them to be his guests at the Jackman Processing Plant in Burbank. The largest response of the year resulted.

The party was held on the spacious stage on the second floor of the

Jackman building. Walter C. Kelley, the famous Virginia Judge, stepped to the microphone at 9 o'clock following his introduction by the host for the evening. On several occasions the Judge stepped down from the bench to relate incidents that had come under his observation in the course of a wide experience with men and affairs, with resulting hilarity on the part of the guests. The judge is a rare entertainer.

One of the features of the evening

was the presentation by President Victor Milner, on behalf of the membership, of a gold life card to John Arnold, recently retired from the presidency of the organization after a service of seven years. Along with the card went a box of imported pipes inclosed in a leather case bearing an appropriate inscription on a gold plaque.

### Jackman Thanked

The president in opening expressed his pleasure in witnessing the progress being made by Treasurer Jackman in a business way, and on behalf of the membership extended thanks to that official for his efforts to entertain them.

He then turned his attention to John Arnold. Sentiment aplenty crept into the remarks of the new president, as was to be expected between two men who have been so closely associated for twenty years.

The former president responded in the same vein. He bespoke for the new president the same cooperation that the members had extended to himself during the preceding seven years.

The party was entertained by a Fanchon and Marco Review. Frank Yacanelli and his side-kick won high honors by their funmaking.

### Honolulu Club Moving

At a provisional meeting of the proposed Honolulu cinema club September 21 fifteen persons were present. A committee consisting of Francis C. Williams, who has been instrumental in organization work; H. H. Hutchison and V. E. Clark was chosen to draw up a constitution and select a name for the club.

A tentative plan is to hold meetings every two weeks. Willis Thomas gave a short talk on filming color and illustrated it with a film exposed in the islands. Those present had a peek at Doctor Loscher's "Red Cloud Lives Again," that product of the 8mm. Camera Club's president having crossed a couple of thousand miles of the old Pacific to be with the new club.

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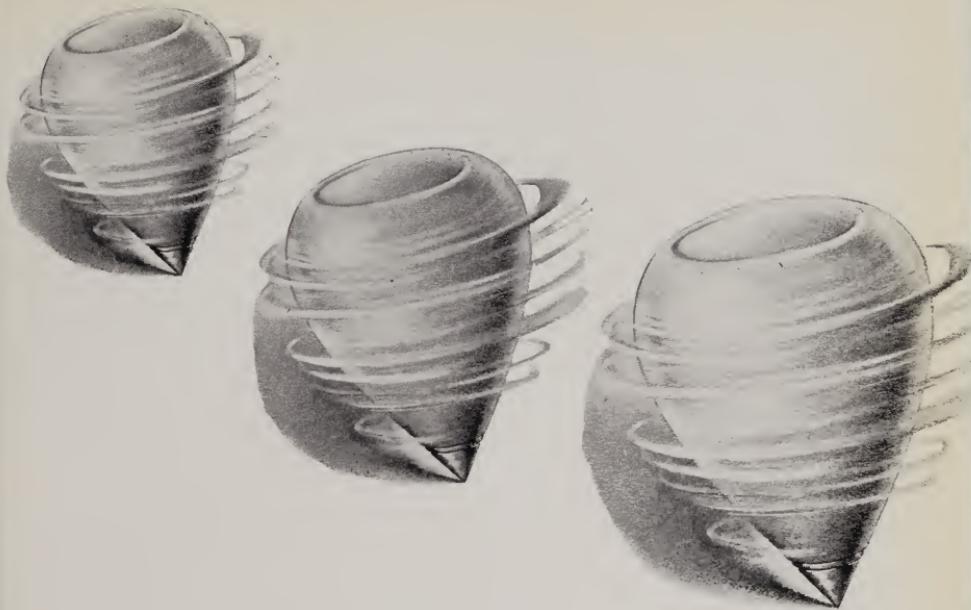
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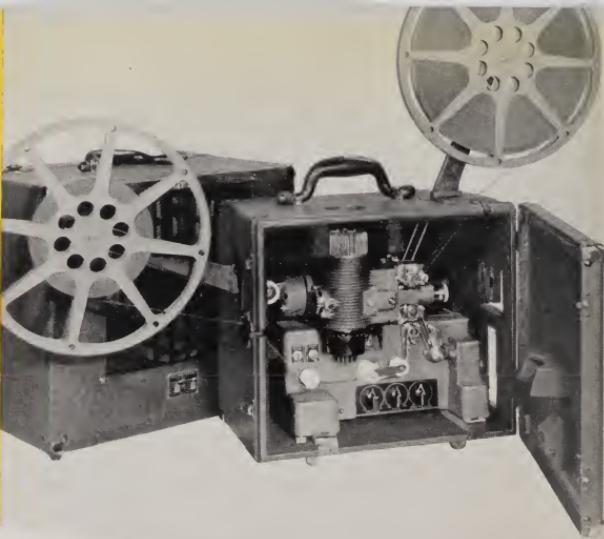
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# WIDE WORLD SUPPORTS COLUMBIA MOVIE SHOW

Duncan Little Gets Word of Help  
Coming to Aid International Event

**P**LANS for the International Amateur Movie Show, which Duncan MacD. Little of New York is arranging on behalf of Columbia University, are progressing in a decidedly satisfactory manner.

Almost on the day of the first announcement of this most interesting and unusual movie show came promises of wholehearted support from the American Society of Cinematographers, in Hollywood, and the Institute of Amateur Cinematographers in London.

These promises (which it seems will be fulfilled 100 per cent) are not surprising, for Mr. Little is a charter member of the Society of Amateur Cinematographers (the junior society of the American Society of Cinematographers) and "Liaison Officer" of the Institute of Amateur Cinematographers for the United States.

Canada was next to fall in line, and this is not surprising either, for many of the films that Mr. and Mrs. Little have made were exposed in Canada, and many are the communities there that would never have seen a movie were it not for the shows presented annually by these two New Yorkers.

And, too, when in 1936, the Hon. Arthur Bergeron, Sous-Ministre de la Voirie of the Province of Quebec, and in 1937, when the Hon. Louis Cadre, Sous-Ministre de la Commerce et l'Industrie, sponsored cinema competitions in connection with the great 125-mile canoe race on the St. Maurice River, it was to Mr. Little they turned for aid and advice.

#### Canada Will Be In

Of course Canada fell into line. The Montreal Movie Club is conducting a nationwide contest to select the outstanding Canadian film for 1937, which will be offered for the International Show.

Because he, too, is a Liaison Officer of the Institute of Amateur Cinematographers, Dr. Hugo Fleischer of Vienna, Austria, has wholeheartedly proffered his aid and assistance. Not only will he help by selecting various films for the International Show, but he has promised to secure the

winning film from the "Concours International" recently completed in Paris, this outstanding film being an Austrian production.

Early in October Mr. Little received word from the Bund Deutscher Film-Amateure E. V., which offers its cooperation as well as suggesting two films which it deems worthy of entrance in the judging.

And so the list grows.

#### Spain Hopes

There is promised a prize winner from Japan and another from Scotland. A recently formed national group of amateurs in India has inquired how it can participate and help, and the aid of a leading club of amateurs in Paris has been offered.

There is a note of sadness in a letter received by Mr. Little from a group of amateur moviemakers in Spain—"we hope the special circumstances under which our country is now suffering will not disturb an effective cooperation." "Amen to that," commented Mr. Little.

And so the list grows—from the Orient and from the antipodes—from Europe and from "Our Lady of the Snows"—almost without exception, the word is always, "We will cooperate."

Amateurs of the cinema from all parts of the world are standing shoulder to shoulder with Mr. Little, and helping as they can to make the International Show a success.

#### Why I Prefer —

**Y**OU might be interested to know why I prefer your magazine to most others. First, it is quite evident that most of the articles in the professional section are written by experts.

You feel it—that's all.

Second, there is more TECHNICAL detail in the articles, and they are not cluttered with a mass of elementary detail.

PAUL S. NICE.

Denver, Sept. 22.

#### Littles Are Hosts at Real Motion Picture Evening

**O**N the evening of Saturday, October 2, Dorothy and Duncan Little at their home in 33 West Sixty-seventh street, New York, were hosts at "An Evening of Motion Pictures." The program was a most interesting welding of the old and the new, ranging from the famous subject of "Grass," which attracted great attention a decade ago, to "The Total Eclipse of the Sun," exposed in Peru this year by Charles Coles, cinematographer of the American Museum of Natural History.

"Grass" is the story of the annual migration of a remote Kurdish tribe in quest of grass for its herds. It is a tale of hazard and adventure.

Balancing the wide geographical jump from one side of the globe to the other was "The Circus Is in Town," bearing awards of two honorable mentions and photographed by Mr. Little.

Completing the program was an old friend, "I'd Be Delighted To," by Cinnewink Cinners, awarded third prize for general excellence in the 1932 competition of the American Cinematographer. The film made a special trip across country for the showing, and according to reports was well received.

The same program was shown the following evening before the Men's Faculty Club at Columbia University. All of the pictures were staged with musical backgrounds on each occasion. In this connection "Grass" presented a trace of opening difficulty. It had been ten years since Mr. Little had seen the production and those who assisted him had never seen it.

It was an unusually well-rounded program, one that would require a search to discover a precedent matching it for contrast in its elements of drama, astronomy and science, the battle of primitive peoples for bare existence, display of the carnival spirit in a modern city, and of comedy—subtle, maybe; even spicy, perhaps, but after all the duties assigned to spice in the cook book are quite well defined.

# AMPRO'S MODEL L FOR ALL HOUSES

**T**HE Ampro Corporation of Chicago announces its Model L, a new 16mm. sound-on-film projector for showing to audiences to two to three thousand persons. The "L" is designed to give theatre quality performances with ample, clear, undistorted sound to larger than ordinary audiences.

The model is shapely and sturdily constructed to withstand greater use than is likely to be encountered. No expense or scientific knowledge has been spared to produce a "masterpiece" in projector building.

Entirely portable, it is completely contained in two compact carrying cases, the projector in one, with amplifier and speaker in the other. In position, the projector rests firmly on top of the amplifier and may be operated either open or closed depending on the acoustics of the auditorium.

#### Controls Centralized

It is so designed that, when the projector is being used for silent films alone, the accompanying amplifier and speaker may be used separately to provide microphone talk and entertainment. To assist the inexperienced operator, all operating controls of the projector and amplifier are centralized and mounted on two panels.

When switching on the amplifier its panel is illustrated, which not only facilitates manipulation but indicates the current is on. There is a convenient pilot light also to aid operation which can be turned on as desired.

Permanently attached arms, capable of taking reels up to 1600 feet of 16mm. film, are swiveled to enable instant movement in various positions without detaching, while the automatic rewind will handle 1600 feet of film in less than a minute without transferring reels or changing belts.

#### Ample Ventilation

Ample forced ventilation protects all standard prefocused base projection lamps up to and including the 750 watt. A triple claw movement engages three sprocket holes in the film simultaneously, which enables the film to be fed properly even though two of the three sprocket holes engaged are torn and useless. A rotary type shutter is multi-bladed, interrupting the light four times a cycle, thus affording maximum light efficiency.

A still picture button will permit the exposing of one frame at a time

on the screen, and in operating position a safety shutter automatically drops into place in the path of light which allows the still picture to be projected indefinitely without injury to the film.

The shutter knob is operated manually so each frame or picture can be shown one at a time.

High quality reproduction is produced through a 3 stage class A plus type amplifier with five tubes operating on 50-60 cycles A.C. 100-120 volts. The total undistorted output is 40 watts with a maximum output of 55 watts.

The model L embodies all of the basic and exclusive Ampro features and is fully covered by patents and pending patents, including a license under the Western Electric patents covering 16mm. sound reproduction.

## Training for Army Men

Captain W. W. Jersey of the Signal Corps of the United States Army is in Hollywood to begin his study of studio motion picture production in continuation of the cooperative training program carried on by the War Department and the Research Council of the Academy. The captain is a 1918 graduate of West Point.

Captain Richard T. Schlosberg, who completed this course of training last year, and Captain Charles S. Stodter, who was in Hollywood the year previous on the same duty, are now engaged in training film production at the War Department studios in Washington.



## See Heavy Leica Exhibit

What promises to be a cross section of miniature photography as practiced today and the photographic event of the season is the Fourth International Leica Exhibit to be first displayed at the International Building, Rockefeller Center, New York, from Jan. 8 to 23 inclusive. Already it is surpassing expectations in the quality and number of entries received.



Ampro's new Model L, 16mm. sound on film projector for showing to large audiences.

# HOW TO IMPROVE LIGHTING HOMES FOR CINE FILMS

By WILLIAM STULL, A.S.C.

of lighting would have made them do so.

#### Backlighting Simple

That trick is backlighting. Most discerning amateur filmmakers will go far out of their way to backlight exterior shots, but when they come to making interiors they all too often forget how helpful this trick can be.

In this particular case backlighting would have been very simple. The club had four or possibly five lamps, all of the clamp-on variety. The curtain used as a background was, like most drapes, suspended from a curtain-rod, and that rod was, in this case, high enough to be well out of the picture.

One of those extra lamps could very easily have been clamped on to this rod and directed down on to the people, taking care, of course, that the direct rays of the lamps didn't strike the lens of the camera.

The result would be an outlining highlight on the heads and shoulders of the people, which would separate them very effectively from the background.

Sometimes an ordinary photoflood, used this way, may not be strong enough to produce the desired effect; in that case, the more powerful No. 2 photoflood can be used.

Incidentally, the advantages to be gained by having some lamps equipped with photofloods of one size and others with larger or smaller globes are another thing not always appreciated in amateur filming.

#### Diffusers for Lighting

The use of diffusers for close-up lighting is another simple trick that hasn't had any too much attention. They're very useful wherever you want a soft, even light, as in closeups in either black-and-white or color. You can make diffusers easily from tracing cloth or white silk.

Just how to make them must depend on the type of lighting units you have. One construction consists of a simple disk or square of plywood, with the center cut out and the diffusing material stretched over it. A simple pair of hooks can be screwed into the wood to enable you to hang

the diffuser over the edge of the lamp's reflector.

Another simple construction would be to fold over the top and bottom edges of the cloth as a window shade is folded at the bottom, and to slip a length of really stiff wire through this loop.

Make a right-angle bend in the wire, so that the projecting end is at right angles to both edges of the cloth. Tack these projections—which should be about three inches long—to ordinary wooden spring clothespins with ordinary staples—and your diffuser is complete.

By means of the clothespins the device can be clipped to the edges of your lamp's reflector; and since the supporting wire is two or three inches long, your diffuser will not be too close to the heat of the globe, and plenty of air for ventilation can get through. If you plan the size and shape right, your diffuser will automatically be held taut when clipped in front of the lamp.

Another phase of lighting that still seems to give trouble is the matter of lighting extreme long-shots. Most amateurs have found that a lighting that is excellent for people is inclined to be flat for a long shot of a room or corridor.

#### Illuminating and Lighting

Here, I think, the trouble is that all too often the filer, unused to lighting so large an area, thinks only of illuminating the area, and not about lighting it. After all, lighting—as opposed to mere illumination—is a matter of arranging highlights and shadows to give an effect of naturalness and depth.

So the first thing to do is to consider the room under its natural lighting and see where the highlight areas and intervening shadow areas actually fall. Then you can duplicate the effect with your stronger photographic lamps.

In many instances you can achieve this natural effect by using your photographic lamps merely to light the area where your people are, and taking care of the other natural high-light-areas in the room itself by mere-



**Costume and background often photograph as very similar dark tones. Backlighting makes them stand apart.**

**W**RITING about home movie lighting is nothing like the chore it was only a few years ago. You don't have to stick so slavishly to a-b-c fundamentals any more. The folks who are using either today's big Cine Specials or little Univexes know a lot more about interior lighting than did the pioneers with their early Cine Kodaks and Filmos. Thanks to supersensitive film and photoflood lamps home movie interiors are now commonplace.

But with all this improvement plenty of cinefilers are still missing some obvious tricks of lighting which would improve their pictures and simplify their problems of interior lighting.

For instance, a few months ago one of our leading amateur clubs made a scene in which quite a number of the members filed past the camera in front of a rather dark-toned curtain. They lit the shot rather well, with (as I remember it) one photoflood lamp on one side of the camera and two on the other, so that there was not only ample illumination throughout but a definite highlight side and shadow side.

That much was all right, but when the shots were later projected it was seen they had overlooked the fact that the dark clothes of the men and the dark fabric of the background curtain would both photograph as very similar dark grays. As a result, the men did not stand out well from their background. Yet a very simple trick

ly screwing photofloods into the normal lighting fixtures. These latter, of course, should be reading lamps and others equipped with shades which will screen the direct rays of the photoflood from striking the lens of the camera.

Now this may—in fact probably will—produce a rather "spotty" lighting, with highlights around the table and reading lamps, and more or less deep shadows in between. Well, basically, that's the natural effect, and it is nothing to be afraid of; in fact, it is something to be desired.

However, sometimes those intervening shadows may be too deep. Our eyes are much faster than a camera lens, and we can see things in natural shadow areas such as we're trying to reproduce, where the more limited lens and film would, under our strict reproduction of natural lighting, get merely impenetrable shadows.

#### General Lighting

Well, the answer to that is "general lighting." Use your regular photographic lights, placed far enough back so that there is a fair amount of light in those shadow areas, but still noticeably less light than in the highlights.

If you use a meter balance things so that the shadows give a reading about half or maybe a third that obtained from the highlight areas. Then you'll have a natural effect, with the natural highlight areas and natural,

open shadows in between. This "filler" lighting, incidentally, is an excellent place to make use of diffusers.

#### Increasing Depth

Professional cameramen have for many years used the simple trick of lighting the different planes of a long shot with contrasting intensities to give an increased effect of depth. It's just as effective on 8 or 16.

One of its simplest uses is in extreme long shots through a series of rooms opening from each other, where you can have one room more strongly illuminated than the next, and so on. Doors through walls shown in your shot can be open, with streams of light coming through them from the rooms beyond, which may not be seen in the shot.

And the trick is a lifesaver when you are shooting along a long, narrow hallway. If you light such a shot in the ordinary way you will get a very flat picture, every bit as inviting as a hospital corridor. But with beams of light coming in from the rooms off that corridor, nicely spaced by shadows, you will get the impression of length—and what's more, your picture will be interesting to look at.

In making a shot like this here's a general rule that's worth remembering: keep the plane in which your people have their most important action the one most strongly illuminated. For this most strongly illu-

minated plane is the one upon which the audience's attention most easily will be concentrated.

And—don't be afraid to let your players walk through the shadowed areas when going from one highlight center to another. Their progress through the shadows and half-shadows as they walk gives a more positive sense of movement to the action. You feel as though they were really getting somewhere.

#### Bureau of Mines Secures Two-Reeler on Combustion

THE Power Within, a new two-reel silent motion picture film that depicts the historic development, construction, and operation of the modern internal combustion engine and operating parts of the automobile, is the latest addition to the Bureau of Mines film library, which now consists of over 4,000 reels that were shown on 100,342 occasions last year to an attendance of nearly nine million persons.

By the utilizing of quartz glass in place of the usual metal cylinder head of the motor, actual photographs were taken with a specially designed camera capable of taking 5000 pictures a second, thus portraying the actual combustion and the burning of gases within the cylinders. Each part of the engine is graphically depicted in the first reel of this picture.



These three pictures were made without moving the camera, changing only the lighting. Note how increasing the number of contrasted planes of highlight and shade apparently increases the depth of the hallway. In the left-hand picture only two photographic lamps were used: in the foreground and behind the camera at right. The two farther rooms were illuminated simply by screwing photofloods into regular lighting fixtures out of the picture to the left. In the center picture the front light is moved farther to the right of the camera and an additional photographic lamp placed to the right in the farthest room. In the right-hand picture no frontlight at all is used. The lighting of the first picture would be best adapted to action played in the foreground; that of the second to action in the middle distance and that of the third to action mainly in the most distant room.

# HERE'S THE ANSWER

By A. S. C. MEMBERS

## Horse-show Events

*I am much interested in making 16mm. pictures of horses in action, and I would appreciate advice as to the best camera angles for such scenes. First: horses in action in a ring but not jumping. I have stood on top of an automobile on the long side of the ring and panarammed as steadily as possible following the rider (my son) of most importance.*

*The results are decidedly unsatisfactory. He is too small most of the time; the constant variation in size in connection with the moving background and the short flash of close-up as he passes the camera are all unsatisfactory.*

*Second: horses jumping in the ring. Due to fences around the ring and gates on the side of jumps, I doubt if a continuous, interesting picture can be made with one camera. Also, if you take a high position you minimize what is as a matter of fact really a small rise (four feet), while if you get low for the effect you cannot get anything but the jump. What should I do?*

P. S. N., Denver

As regards your first point, undoubtedly the most practical camera position will be one at normal level in the center of the ring. This will give you a larger image and one of more constant size. Panoramming, on the other hand, will be considerably more difficult, as you will have to make a complete 360 degrees pan. This can be done, but it would be wise to get in as much rehearsal as possible before you do your actual shooting.

As to the second point, you are right in assuming that the ideal way to cover such events would be with two or more cameras, one a relatively high long shot camera and the other getting close shots of the jumps from a lower viewpoint. You overlook the possibility, however, of getting the long shots and the closer angles at different times.

If the particular routine followed by your son in such events does not permit you to film a full circle pan of one circuit of the ring and then to move in closer for low-angle shots of the subsequent jumps you can very probably get the long shots during the actual exhibition and then fill in the

closer angles some other time—perhaps even on another day when your son could take the jumps especially for the camera. Except to the expert horseman, one jump is very like another on the screen, and unless the audience has some positive indication (like empty stands in the background of close shots compared to full ones in intercut long shots) that the two were filmed at different times you can make your picture much more effective filming the events this way.

FRANK B. GOOD, A.S.C.

## Close-Ups of Dolls

*I am undertaking a project of filming about 30 colored dolls with color film and my Eastman Cine 8 is equipped with f:1.9 lens. These dolls are each about 10 inches high and are fastened on a cardboard pedestal. Each has brightly colored clothes, beads, jewelery, etc. I would like to get a good color rendition of each doll separately and have the image as large as possible on the screen. Please advise me on the following points:*

1. *Use of Weston exposure meter; how to have background when using meter.*
2. *Advisability of turning models on platform to get different views.*
3. *Type of lighting advised.*
4. *Colors of background.*
5. *Size of field covered with lens set at 2 feet; also depth of focus.*
6. *Whether practical to use supplementary lens to get still closer for certain parts of doll, to show more detail.*
7. *Type of color film advisable..*
8. *Whether certain colors require more light than others.*

Dr. S. L. B., Milwaukee.

1. In using a Weston exposure meter on a subject like this the thing to do is take your reading on the object of greatest interest, in this case, the doll. Take the reading with the meter close to the doll, so that it reads only on the doll, and is not influenced by the background.

Be careful, of course, to avoid holding the meter so it reads on its own shadow. Several color filmers, both amateur and professional, have had excellent results, especially in cases

where there might exist a considerable range of tonal contrast, taking the reading on a sheet of flat gray paper, like blotting paper, held in place of the actual subject. In any event, you will do best to plan both exposure and lighting for the subject, letting the background take care of itself.

2. It would be an excellent idea to turn the models on the platform. Not only would you get a variety of differing views quickly and easily, but you also would inject a little motion into scenes which might otherwise be motionless.

3. By all means use photoflood globes in good photographic reflectors. Never attempt to use the ordinary 500-watt or larger projection type globes some of the earlier types of lighting units used; these burn much more redly than the photofloods, and while Type A Kodachrome and the regular Kodachrome when used with its photoflood filter will give normal color rendition with photoflood illumination, the redder light of ordinary lamps will give your picture an unpleasant orange-red cast.

As to the arrangement of your lighting, a soft, rather flat lighting is best. Place one lamp on either side of the camera; one of these might be just a bit closer to the subject than the other, to give a pleasing balance, with a suggestion of a shadow side and a highlight side; but for color these contrasts should be very small.

If you are using a plain background of colored cloth you can make the doll stand out from it by having one or two lamps directed on the background itself but not striking the doll. To a certain extent you can accentuate the coloring of such a background by using sheets of colored gelatin (obtainable cheaply at any theatre supply store) the same color as the background, over these lamps.

In this case, the lamps illuminating the background will have to be considerably stronger than those on the subject, to offset the filtering action of the gelatin.

4. The coloring of the background will depend upon the effect you desire and upon the coloring of the dolls' costumes. A plain sheet of black velvet makes a very good, unobtrusive background and will accentuate the coloring in the subject.

(Continued on Page 488)

# STORY OF GIRL AND DOG

**A** BACKYARD movie which shouldn't offer any casting troubles in the average family is "Dog Daze." The cast consists of Father, Mother, a child we'll call Jane, and a dog. If you haven't a suitable daughter, granddaughter, niece or neighbor to play Jane's part it's just as suitable for a boy.

Any pooch will do for your dog star—he doesn't have to be a kennel club champ to win a blue ribbon in this picture. With that out of the way—let's go.

## DOG DAZE

Scene 1—Fade In. Long shot of a building with a prominent sign saying, "Dog Show Today." Mother and Father come out of building, talking.

Scene 2—Close medium shot of Mother and Father. She says something to him.

Scene 3—Close-up of Mother, speaking.

Title—"I'm glad you like the dog I picked out for Jane's birthday. She's wanted one so long."

Scene 4—Same as Scene 2. Mother finishes her speech; Father nods and starts to reply.

Scene 5—Close-up of Father. He nods and speaks.

Title—"Let's surprise her with it."

Scene 6—Long shot, three-quarter angle, Mother and Father walking into scene. He finishes speaking, she registers agreement. As they walk out of picture, Fade Out.

Scene 7—Fade In. Long shot of sidewalk at a corner in a good residential district. Extending from camera to the corner there is a hedge or fence. Jane comes around the corner, carrying her school books, obviously on her way home from school. Halfway to the camera she stops and looks around as though she heard something and wanted to find out where it was.

Scene 8—Close-up of Dog, barking.

Scene 9—Same as Scene 7. Jane turns, goes to the hedge, and looks over excitedly.

Scene 10—Close shot, from high angle, of Dog. It is very dirty and bedraggled—obviously a stray.

Scene 11—Close-up of Jane, from low angle. She registers delighted surprise.

Scene 12—Close follow shot of Jane as she climbs over or runs around the hedge (as your location may necessitate).

Scene 13—Close shot of Jane and Dog. She comes up to it and "makes friends" with it. Add close-ups of

Jane and Dog as may be convenient with your cast.

Scene 14—Close-up of Jane, speaking.

Title—"Gee, I bet you're hungry! Come with me, puppy!"

Scene 15—Same as Scene 13. Jane gets up and exits, followed by Dog.

Scene 16—Long-shot on street. Jane enters, followed by Dog. She turns in at her own yard, and hurries to the front door. Suddenly she stops.

Scene 17—Close-up of Jane. She looks around, suddenly nervous.

Scene 18—Medium-shot of Jane. She turns from the steps, and heads toward back door, moving a bit stealthily.

Scene 19—Long shot of back door. Jane enters, followed by the Dog. She goes to the back door, looks in, and finding no one there, goes boldly in with the Dog.

Scene 20—Medium long shot by icebox. Jane enters. She opens the icebox door and looks in.

Scene 21—Close-up of a plate of lamb chops in icebox.

Scene 22—Same as Scene 20. Jane reaches into icebox and brings out a lamb chop.

Scene 23—Long shot. Jane turns from icebox, lamb chop in hand, and gives chop to the Dog.

Scene 24—Close-up of the Dog, eating the lamb chop hungrily. Fade Out.

Scene 25—Fade In. Close-up of bare-picked chop bone on the floor.

Scene 26—Close shot of Dog, licking his chops.

Scene 27—Close-up of Dog's tail, wagging.

Scene 28—Medium long shot Jane and the Dog. She surveys the pup judiciously.

Scene 29—Close-up of Jane. She shakes her head and speaks.

Title—"If you weren't so dirty, p'raps Mother'd let me keep you."

Scene 30—Close-up of bathtub faucet, with water running.

Scene 31—Long shot in bathroom. Jane is struggling to lift the Dog into the bathtub. It proves too much for her, as he is too heavy and the tub too high. She puts him down, looks around, thinking, gets an idea, and exits.

Scene 32—Long shot of bathroom door. Jane enters, tugging a laundry tub.

Scene 33—Medium long shot. Jane with a pitcher or saucepan is ladling water from the bathtub into the laundry tub.

Scene 34—Similar medium shot, but from a slightly different angle. Jane sets down her dipper, and turns to pick up Dog.

Scene 35—Long shot. Jane struggles and finally gets Dog into tub.

Scene 36—Close-up of Jane's hand, taking Mother's favorite shampoo from shelf.

Scene 37—Close medium shot of Jane squatted down on floor, bathing Dog.

Scene 38—Close medium shot of Jane, as she rinses Dog off, pouring water from tub over him with her pitcher. Finally she sets it down; she is through.

Scene 39—Close-up of Jane. She looks around, wondering how to dry the Dog. (If you wish, you can cut in inserts of wringer, clothesline, etc., followed by a return to the shot of the girl, shaking her head.) Finally she gets an idea, and reaches for the best bath towel.

Scene 40—Close-up of Jane's hand, taking towel.

Scene 41—Long shot of bathroom. Jane finishes drying Dog, and they exit together.

Scene 42—Close-up of Mother's and Father's feet approaching front door.

Scene 43—Long shot of Jane and Dog. She stops, hears the footsteps, and hides the Dog in a closet. Fade Out.

Scene 44—Fade In. Long shot of living-room, the family is grouped around the room. Father and Mother are reading. Jane goes to her father, timidly, and asks him something.

Scene 45—Close-up of Jane, speaking.

Title—"Daddy, can't I have a dog?"

Scene 46—Medium close-up of Father. He sternly shakes his head in over-obvious refusal.

Scene 47—Long shot of room. Jane goes over to Mother and repeats her plea, again getting a refusal.

Scene 48—Medium shot of closet door. It swings open and Dog comes out.

Scene 49—Long shot of back porch. Dog noses his way out through door.

Scene 50—Long shot of living room. Father gets up and goes out.

Scene 51—Medium long shot on front porch. Father comes out, looking for the evening paper. Up trots the Dog with the paper in his mouth, tail wagging, and gives paper to Father.

Scene 52—Close-up of Father, from low angle. He smiles.

Scene 53—Close-up of lamb chops in ice box. Father's hand reaches in and takes one of them.

Scene 54—Close-up of Dog on back porch, eating chop.

Scene 55—Long shot of living room.

(Continued on Page 487)

# IT WON'T BE LONG NOW

Close of Entries for Cinematographer's  
Contest Falls at Midnight November 30

**W**ELL, it won't be long now. November 30 soon will be here, and when the hour of midnight falls the real work will begin—the work of examining, assaying, judging what has been done by amateurs in different parts of the world to win the crown given by the American Cinematographer for the most worthy work with the camera.

There will be prizes, yes, of \$500 cash and an equal amount of value in equipment. But those who make this magazine are not misled by the belief the contenders are motivated solely by the desire for the gain that may go with the awards.

They know these amateur camerists are seeking the honor of creating a winner, of photographing a picture that will stand out among its fellows. They know as well as every one else that the best photography will not of itself win an award. That is a part of the beginning—the foundation—after the theme itself.

Following that is the cutting and assembling; the titling—and so much leans on that! It is the story of the play. The literary quality may cling to titles, dominate them and make live the characters to which the lines are ascribed just as surely as does the dialogue of a novel make great or leave mediocre the shadow lives of the men and women they aim to express.

By literary we do not mean flowery. Far from that. We mean the human, every-day, man to man manner of speaking, terse, crisp. And don't neglect your punctuation, keeping in mind that no punctuation is less of an evil than bad or wrong punctuation.

This is one of the phases of titling the value of which many do not realize. It has the same relation as reasonably good photography to the observer. It is never noted. But if by chance it be bad it is a smack in the eye.

#### Speaking of Prizes

Speaking of prizes the grand prize is \$200 cash. Then there will be others of \$50 each, for photography, color, scenario, home movie, educational and scenic. There is no boundary for the grand prize. That's for what the committee in its most careful judgment declares to be the plu-

grand best, one that will be on the go to the corners of the world until it is worn to a frazzle.

Those who are not new in contending for honors realize a good amateur picture is the instrument for bringing its producer's name into places far from the maker's home. Within the month two of these subjects, both of them photographed several years ago, in their final destinations spanned a distance of more than five thousand miles.

"I'd Be Delighted To," by Cine-wink Ciners, rested and worked on a Saturday evening before thirty-five friends in the home of Mr. and Mrs. Duncan MacD. Little in New York. The following evening before 125 members of the Men's Faculty of Columbia University again it demonstrated its subtleties, and to the enjoyment of both of these parties.

At the same time over in Honolulu

#### TO OUR ADVERTISERS

**T**HE AMERICAN CINEMATOGRAPHER announces that beginning with its January issue it will be increased in size from 8 by 11 inches less trim to 9 by 12 inches less trim.

The type columns will be lengthened to 10 inches. This of course will be exclusive of the usual 2 picas allotted to the running folio.

The columns will be widened from 13 picas to 14 picas (2½ inches).

The page width will be increased from 41 picas to 44 picas (7½ inches).

We are convinced this increase to a more standard magazine size will give our advertisers, especially those using larger space, better opportunity to tell their story and at the same time in some instances will mean definite economy for them through avoidance of having made special plates to fit our columns.

This is the first time in the seventeen years of its publication The American Cinematographer has changed the size of its page.

at the formation of a cine camera club there Dr. F. R. Loscher's prize winning "Red Cloud Lives Again" was shown by the organizers.

Each of these films had been specially sent for, Mr. Little for the one and Francis C. Williams for the other, and had been dispatched by the Cinematographer on request of the two men.

So the successful contender knows he has an ambassador at court who across an area of thousands of miles carries the cheer of one amateur cinematographer to another.

Among the equipment prizes already listed are articles produced by the Victor Animatograph Corporation, Bell and Howell, Weston Electrical Corporation, Agfa Ansco Corporation, Mitchell Camera Corporation and Harrison and Harrison.

Victor is hanging up a Model 11 Victor Master Silent Projector (complete with carrying case). Optional credit will be issued in the sum of \$147 against purchase of Models 4 or 5 Victor Camera, any model Victor Sound-on-Film Animatophone, Model 22 Silent Victor Master Projector.

Bell and Howell will award \$100 in merchandise to be selected by contestant adjudged maker of film best in photographic technique and made entirely with Bell and Howell cameras, either 8mm. or 16mm.

Mitchell Camera Corporation has sent in an Astro f:1.8 20mm. lens, to be awarded at the discretion of the judges.

Agfa Ansco sponsors six 100-foot rolls Agfa 16mm. Hypan Reversible Film and six 100-foot rolls Agfa 16mm. Fine Grain Plenachrome Reversible film. The rolls of Hypan are to go to the person winning the highest award and using Agfa film for it. The Plenachrome rolls are to go to the next highest prize winner who takes his prize-winning picture on Agfa film.

Harrison and Harrison have handed to the judges a Harrison color meter, in leather case, complete with six 1¼-inch meter-matched filters in leather filter fold.

Weston Electrical Instrument Corporation contributes without reservation as to the character of the film one of its famous Weston Cine Exposure Meters, Model 819.

## News of the Movie Clubs

### Los Angeles 8mm Club

The meeting of the Los Angeles 8mm. Club October 12 was called to order by the President, Dr. Losher, who announced that at the next meeting the officers for 1938 would be elected. He further said the present officers would not consent to run for re-election.

A nominating committee composed of Dr. Henry Linek, Earl Janda, Claude Cadarette, Randolph Clardy and President Losher was appointed. The members were requested to hold several meetings and suggest the names of at least two members for each office.

G. C. Cornell, chairman of the news committee, reported that quite a few members of the club had been writing articles in amateur movie magazines and that it would be very beneficial to the members to read these articles. He mentioned the newly announced three turret lens mount and suggested a well planned scenario should have some type of running gag in order to give it a touch of comedy.

#### Josh the Prexy

Dr. E. T. Boller and Dr. G. E. Schonen were announced as newly accepted members of the club. Questioning brought forth the fact that both these new members were dentists and Dr. Losher was facetiously accused of trying to make it a dental club instead of a moving picture club.

The technical committee was questioned at length regarding different types of exposure meters and their peculiarities. They suggested that they did not believe it advisable to rely entirely on the reading given by the exposure meters and that in arriving at the correct exposure in shooting scenes common sense still played a large part in finding the right stop.

Films of Members Bingham, Cunningham, Hague, Becker, Pyle and Janda were shown and explanatory remarks over a microphone made during the projecting of each film.

The film taken by the club at its annual picnic was shown and received the enthusiastic approval of all members. It is in panchromatic about 220 feet in length.

Dr. Henry Linek's technical film on making a porcelain inlay was projected. It was in kodachrome, 400 feet in length. This is the picture described by Dr. Linek in the October Cinematographer. When it was declared by one of the members one of the best ever made in 8mm. an-

other member interjected "or any other size film."

JOHN E. WALTER,  
Acting Secretary.

### Philadelphia Cinema Club

The Philadelphia Cinema Club held its second meeting of the fall season October 12 in the Rose Room of the Hotel Adelphia, with Mr. Hoot, president, in the chair.

Of natural interest is the question of the club's contest, and the method of handling or passing judgment on the films. While no restrictions had been passed on color or monochrome, it was definitely decided no sound accompaniments should be utilized, in the judging of contest films, but that they all should be kept on a par by being shown silent. The November meeting, at which will begin judgment on the films presented, will be restricted to members only.

A new form of sheet has been prepared, dividing it into two major parts, that will enable the judges to reach an instant decision as to the standing of the film. The lower section of the report will go into more detail and will be for the benefit of the film owners, as it will give a clear picture of the natural criticisms resulting from the attitude of all the members present.

Highlights of the October meeting centered around Kenneth Space's film

entitled "Not a Word," one of the first ten of 1934.

A commercial film entitled, "Making a 24 Sheet Poster" was presented through the courtesy of the McCandlish Lithographing Company. Both films represented entirely different types of undertaking, and were well received, while new pointers were gleaned by the members from the two types of films presented.

A talk by Mr. Speckman, general salesmanager of McCandlish Lithographing Company, preceded the showing of his company's film. He brought out the fact the science of lithographing is based on the well-known principle that water and oil will not mix, and that writing on stone can be transferred. These basic principles are still the underlying ideas behind the entire lithographic industry, and of course with refinements that have come up through the ages make the entire process possible. About 45 members were present.

B. N. LEVENE,  
Chairman of Publications  
Committee

Edwin L. Dyer, A.S.C., while recovering from his recent long illness, followed the example of several of his A.S.C. fellows by extending a hobby into a profitable sideline business. In Ed's case the hobby was woodworking, for which Edwin has a completely equipped home workshop. Now it's E. L. Dyer and Son, proprietors of Sunland's most complete cabinet shop.



Los Angeles 8mm Club Relaxes in Griffith Park on Its Summer Outing.

# HOLIDAY MOVIEMAKING AS NEWSMAN SEES IT

By JOHN L. HERRMANN,

A.S.C., F.R.P.S., F.R.A.S.

**Y**OU might not think the newsreel cinematographer and the average home movie had anything in common—but they have!

Of course the average amateur doesn't often take trips to the poles, "cover" floods, or travel about the country with Presidential candidates. Well, the newsreel cameraman does not do it often, either. Such assignments are definitely in the *extraordinary* class; they're not run-of-the-mill assignments.

In between these spectacular (and infrequent) achievements are dozens of little every-day jobs that are a lot like the pictures and problems of the average amateur.

There's one kind in particular: the half dozen or so regular "seasonal" news stories which must be filmed every year. You know—those little sequences which tie in with our more important holidays: New Year's, Memorial Day, Fourth of July, Labor Day, Armistice Day, Thanksgiving Day and Christmas. Come the proper time o' year and you'll see 'em in some form in every newsreel.

And what are they? Nothing so very different from the holiday films your neighbor makes. You don't know the people in the newsreel stories; but then, half the time you don't know the folks you see in the holiday films your neighbor shows, either. But both of 'em try to get over the idea of how the holiday was celebrated.

I think the amateur can borrow several useful ideas from the newsreeler's treatment of these yarns.

#### Get Human Interest

First of all, there is the treatment itself. A newsreel man in New York or Chicago may make a Thanksgiving story—but folks in Boston, New Orleans, San Diego and Miami must respond to it as well as the New Yorkers or Chicagoans do.

To get that appeal, even from a subject that touches everybody, you have to strike a note that is familiar to everybody. In other words, add to the bare facts of your story a human interest appeal.

The bare facts of almost any Thanksgiving story are: A big din-

ner; a family gathering; everyone getting enough turkey and pumpkin pie; perhaps the big football game in the afternoon—and, almost always, that "too much dinner" aftermath.

Photographed just as a matter of fact, you haven't much to go on there. But if you tie them together as a human interest story, showing definite people anticipating and doing these things, you've got something. And in a family film, you can get shots of practically every member of the family doing something natural and interesting.

For instance, to plant the date, we can begin with a shot of falling leaves and a close-up of the calendar. Then a shot of the butcher's sign, "Buy your Thanksgiving turkey now!" and a shot of his store, with mother coming in to select the turkey.

Then you can show the various preparations for the feast: stuffing the turkey, making the pumpkin pie, shining up the best plates and silverware, and so on.

#### Enter Relatives

Here's a good time to show father and Junior getting into their Sunday clothes, Sister putting on her war-paint, and so on.

Next, in come the visiting relatives. You can run the scenes of these guests and their welcome as long as you wish—particularly if they are relatives who don't get together often.

And about now is a good spot for the shot of the turkey going into the oven.

While the turkey is cooking the menfolk may very likely go to the football game—which gives you an opportunity to use your football shots.

After the game, of course, comes the feast. You can open this with a shot of the roasted turkey coming from the oven, and shots of the table, all arranged for the meal. Next, get shots of the folks playing their knife-and-fork chorus—in other words, demolishing the turkey. Incidentally, a shot or two of father's attempts to carve the turkey are always good comedy.

By the way of an ending a close shot of the shattered remains of the

noble bird are always good, and for a "black-out" finale one of the surest of sure-fire gags is a shot of Junior in bed while the family doctor administers the time-honored castor oil. This strikes a familiar response in any audience: I know—I've used it to end dozens of Thanksgiving stories!

All of this looks like an awful lot of filming to do on one holiday, doesn't it? Especially when your camera crew will probably be pretty well stuffed with turkey most of the day!

#### Anticipating

Well, take another tip from the newsreel man, and "stage" as many shots as you can beforehand and plan so you can make the un-stageable shots quickly and with the minimum of confusion.

Of course you can get the butcher's shop scenes days—perhaps even weeks—before the turkey is really bought. The same goes for the shots of the family getting dressed for the affair.

Most forehanded housewives do a lot of the preliminaries—making the dressing, baking the pies, etc—the day before the holiday. So you can cover these quite comfortably at that time. The shots of the dishes and silverware being spruced up also can be done beforehand; in fact they can be done almost any time it's convenient. And unless you are a stickler for absolute accuracy, those football game shots can be some you made at one of the earlier games—or even last year.

That final gag shot of Junior re-penting his last three slices of pie can also be staged at any time. It can even be the first scene made for the picture!

Let's see what that leaves us. The shots of the turkey going into and coming out of the oven must naturally be made on the great day—unless your family enjoys turkey on other days than holidays. The shots of the guests arriving must as a rule be made on the holiday, too. The shot of the dining table decorations and the scenes of the group eating and so

on must naturally be made right at the time, too.

You will see, if you plan your filming this way, you can get a lot of the filming done with either before or after the rush of the actual celebration. Now if you organize your lighting, you can film a lot of these remaining scenes surprisingly quickly and easily.

#### Morning Shots

Those two shots of the turkey going into and coming from the oven will be simple close-ups and can be done with about one lamp, so quickly that even the most harried cook will hardly know you've been there.

The latter shot, incidentally, does not absolutely have to be made when

the turkey makes its final emergence; it can be done earlier, when the almost completely cooked turkey is brought out for the last inspection and basting.

The shot of the festive spread before the feast can be done in the morning, as soon as the table is spread and decorated. Then, with that shot out of the way, you can set up your lights unobtrusively in the room and leave them there. With a little planning you can arrange them so that they won't have to be moved: so that all you have to do is turn on the lights and focus the camera.

You will know where each person is likely to sit, and which ones you will want to film. Knowing that, it

will be easy to arrange your lamps so that the lighting for each will be approximately right; often you can make one lighting do for quite a number of shots.

And in a film like this, the less fussing round you do with lights and camera the more spontaneous—and the more natural—will be the shots you'll get of your relatives.

That leaves only the shots of the arriving guests to make. And what could be simpler than to set up your camera on the porch (on a tripod, of course), all focused and wound so that you need only press the button as you go out to greet the visitors, while the camera, running automatically, films you and your guests in really candid camera movies?

## GREAT SENSITIVITY IN TWO AGFA PRESS FILMS

**I**NCORPORATING important new developments in emulsion-making technique, two new Agfa films have been announced that provide the photographer with greater film sensitivity than has ever before been available. While improvements in film speed have in the past been gradual, these new films exhibit a sensitivity that is from three to four times greater than present "super" types of photographic film, the company announces.

This amazing gain in film sensitivity will mean an advantage of 1½ to 2 full lens stops to the photographer—or a permissible shutter speed that is three to four times as fast as that previously necessary. The two new Agfa films which possess this unusual speed include Superpan Press and Super Plenachrome Press, two cut films that will be invaluable to the press photographer.

#### Speed Valuable

These will find this extra speed extremely valuable in their work, for in some instances ordinary Mazda light or normal room illumination will be sufficient for pictures. In other cases, small flash bulbs may be used in place of the larger size. The new films will also be a great help for stage photography, candid work, fast exposures under poor light conditions and subjects requiring extreme film sensitivity.

Equal to the magnitude of this improvement in film sensitivity is the remarkable fact that other desirable photographic characteristics like keeping quality, clarity, proper gradation

and color sensitivity have not been affected by the gain in speed.

Of the two new Agfa films, Superpan Press offers slightly greater speed, particularly in artificial light. It possesses panchromatic color sensitivity and has somewhat steeper gradation than the orthochromic film, Super Plenachrome Press. Both press films, which will be available in standard sizes, are manufactured by Agfa Ansco Corporation in Binghamton, N. Y.

## New Eastman Kodak Case Book-Fashion Designed

A radically different camera case, opening book-fashion and containing a "plus" compartment that holds film, exposure meter, range finder and other handy accessories, is now obtainable for the Kodak Six-20 camera, the Eastman Kodak Company announces.

Known as the "Six-20 Duplex," the case is made of fine-quality, smooth brown sole-leather and lined with brown corduroy. A slide fastener on three sides permits the book-style opening, and a corduroy-covered separator, with snap-button fastener, closes the extra equipment side. Construction is rigid, not soft, and provides ample protection against the bumps and shocks of outdoor use.



Users of the Kodak Six-20 or the Kodak Duo Six-20 can carry their complete photographic kit (except a tripod) in this sturdy, handsomely designed book-style case. The "plus compartment" has a corduroy-covered lid that fastens down with a glove snap and keeps film supplies and small accessories from tumbling out. Hand and shoulder straps are supplied.

• November, 1937



Unretouched photograph of confidential Don Lee television receiver and actual image appearing upon it as received 3½ miles away and behind two hills from transmitter W6XAO, Los Angeles.

## Film in Television

(Continued from Page 451)

present in the original runs of several of the examples. They are, therefore, inferior representations of the entertainment afforded in witnessing a television performance. The sound accompaniment also adds to the realism, particularly when the persons photographed are the speakers.

Rules six and seven apply to the laboratory.

### Black Frame Lines

Rule six is: Supply medium or light density prints with black frame lines.

Dark prints, because of the lack of contrast in the toe portion of the H-D curve, and because of the low signal level produced in the television equipment are definitely inferior to lighter prints from the same negative.

The density numbers on the usual Cinex strip should run around eleven for a properly exposed negative. For a dark scene of low key lighting as Figure 1, the Cinex reading would have to be around five to produce a usable print.

Black frame lines should be supplied to insure that no visual impulses are produced by the transmitter when the receiver scanning spot is retracing its path from the end of the last line of the frame to the beginning of the first line of the next frame.

Electrical means are provided to extinguish the spot so that "return lines" will not be visible across the image. However, it is inconvenient to make

the amplitude of these means great enough to prevent the appearance of return lines under all scenes and conditions, particularly if prints are supplied with white frame lines as sometimes occurs.

No frame lines at all may be tolerable, but in film produced for television black frame lines 1/16 inch in width should be supplied, or better, the dimensions of the standard aperture of the Academy of Motion Picture Arts and Sciences observed, which has a black frame line nearly 1/8 inch wide.

### Shifts Should Be Quick

Rule seven is: Employ lap dissolves, quick fades or change instantaneously from scene to scene.

Long fade-outs give the momentary impression to the audience that something has gone wrong with the television equipment. The receiver screen does not go completely dark during a fadeout as occurs in a theatre. It remains lighted to a gray similar to the condition obtained when the transmitter is on the air but not transmitting a visual signal.

In conclusion, it is well to consider the type of productions which will employ this new technique. Television will be received in the home, consequently the length of performance and its construction will parallel that of radio.

### Quarter Hour Intervals

Because television requires the whole attention of the lookers it is to be expected that the interval for any one program will be fifteen minutes, certainly not more than thirty minutes. We have followed this practice in our work thus far.

In the fifteen minute interval comedy, vaudeville, newsreel or serials can be presented. A well produced comedy with the technique of slapstick action and radio gag-telling artfully blended will be a new presentation to the American audience.

The vaudeville programs can utilize acrobatic, singing, tap and ballroom dancing acts, certain magicians acts, and impersonation, monologue and dialogue acts, all with some restrictions, but not modified sufficiently to lose the style of vaudeville should this be desired.

### Film Essential

The broadcasting of a nightly news-reel at a time when all the members of the family can be home is an instance where the use of film is essential. Often news events happen during the day when several members of the family are at work or school. Instantaneous transmission of such events would not reach an appreciable part of the potential audience.



Harry R. Lubeck, Director of Television, Don Lee Broadcasting System, Los Angeles.

Thus a newsreel crew covering the large city in which the television station is located would pick up events of interest, tragedies, etc., and have them on the air by nightfall. Film records of important happenings in other large cities would be flown by air-express and added to the edition the day after happening.

Radio serials, which now occupy an important position in the public mind, could be produced for television with only revision of the scripts in the future to eliminate costly properties.

The half-hour intervals would naturally be occupied by pretentious efforts and if the unbroken interest of the average audience could be insured by excellent story and production a dramatic effort could be made.

### Theme Song Possibilities

It is expected that sponsorship will pay for television programs in much the same way that it pays for the high quality radio programs of today. Low quality sponsorship (lengthy commercial announcements between phonograph records) will probably not enter television because of the increased cost of the programs and the broadcasting equipment.

Compared to present motion picture budgets, the majority of television productions will be low budget pictures. Consequently, large expenditures for stars' salaries, lavish sets, and perfect production will not be made.

Rather, what will become specially trained stars, content with moderate salaries, will perform before simple sets and background projection equipment, with an understanding that the "show must go on" and a director who

will accept their best efforts after he has rehearsed the scene in a speedy but efficient manner.

The theme song, now with a theme picture, offers great possibilities of telling the advertising message briefly in a most pleasing manner. By employing the skill of the commer-

cial artist and the clever advertiser, all will be as interested in following the action of our "theme characters" as we are in following the antics of the little girl and her dog on the billboards or the form of a given advertisement in our more expensive magazines.

The theme picture may always be the same, but by making the principals live from day to day or week to week the high quality sponsor can put over his product with such attention on the part of his prospective customer that even a single word might suffice for his message.

# DR. GERSTENKORN SHOWS FILM OF RAGING YANGTSE

Gets Screen Record of Upper 600 Miles of Tumbling River and Piling Mountains

**A**N amateur film of unusual interest is that just assembled by Dr. Roy Gerstenkorn of Los Angeles. It is the photographic record the doctor made approximately a year ago in a journey up the Yangtse River from Shanghai to Chungking, 1500 miles from the sea. The film takes little heed of the first thousand miles of the journey, that so far as Ichang.

It is when the trip is resumed from that point the real interest begins, the entrance into "The Oriental Wonderland," the "Gorges and Rapids of the Yangtse," as the doctor has named his film. The scenery is wild, beyond any question. The photographer suggested so far as he knew the only parallel to it in the United States is the Colorado River. One indication of the hazards encountered in the final six hundred miles lies in the fact the steamers anchor well before sundown. Many of the scenes seem reminiscent of the Delaware Water Gap, a much magnified Water Gap. The pictures shown here are from the film.

While the exposures were made with the aid of a tripod there were times when its usefulness was much minimized by the turbulent waters through which the little steamer was forced to make its way. There was an abundance of vibration as the craft struggled against the rapids. Many of the shots show most clearly the difficulties of the pilots to keep the ship out of trouble.

#### Lives Saved but Robbed

The vessel seen in one of the accompanying illustrations had been wrecked but a week before the passing of the doctor. The pilot had missed his channel, had hit upon the rocks and with the suddenness characteristic of the river the water dropped until the back of the ship, as was obvious in some of the angle shots, was broken as it was left high and dry. The water at times recedes very suddenly.

Three of the passengers had been drowned and the others had been

saved by bandits, not for a worse fate necessarily but surely for the necessity of surrendering what in the way of valuables they may have been able to take with them.

Although it was a year ago the doctor made the trip, perhaps eight months before the outbreak of the undeclared hostilities, there was no apparent secret on the river that steamers were carrying loads of silver guarded by Chinese soldiers up the Yangtse in order to get it to safety and out of Shanghai.

The pilots are Chinese, although the first men to pilot ships from Shanghai to Chungking were Britishers, one of whom was Captain C. S. Plant, affectionately known as the "Grand Old Man of the Yangtse."

One of the stirring sights on the river which have been captured by Dr. Gerstenkorn is that of a band of trackers, or coolies, in some cases ranging from two to four hundred of them to a junk, harnessed to bam-



One of the "Gorges of the Yangtse," photographed by Dr. Gerstenkorn, demonstrating why steamers sailing through 600 miles of the tricky and hazardous upper river anchor before sundown each day. On the right we see what happened when the pilot made a miscalculation, the craft landed on the rocks and then the water fell away. The passengers were first saved by bandits and then robbed.



Chinese junk anchoring for the night at base of cliff in "Gorges of the Yangtse." On the right human burden bearers show how the cargo transportation problem is handled in the upper reaches of the Yangtse.

bo towlines as they struggle to pull their vessels upstream over fierce rapids. It is a form of labor not conceived by the Westerner.

#### Thousand Drowned

There are many things in the 450 feet of film to which the picture has been reduced which will make it of lively interest to the American. One of the novelties to many accustomed to river travel in other countries is the painting of scales in feet on the rocks, like those on a dam or on the sternpost of a ship, in order the river pilots may know the state of the water without casting the lead.

Indicating the treachery of the Yangtse, statistics show an average of a thousand persons each year are drowned in the river. In some of the rapids a slip overboard means real peril. That is one of the dangers when the coolies on the small boats hook on to the larger vessels in order to transfer passengers.

The film of the doctor's has been adequately titled. A glance at the card from which the titles were printed gives an intimation of the atmosphere of the film: "A photographic journey into the heart of China, through the mighty gorges over the fierce rapids of China's greatest waterway, the Upper Yangtse. From the deck of the sturdy little steamer we view the junks, old towns, hamlets, villages, bandits, pagodas and temples, all teeming with legend and folklore that go to make up the lure of the Far East."

One of the interesting views is that of the paths cut into the side of the mountain hundreds of years ago in order to provide a foothold for the trackers as they haul junks through the rapids. They are chiseled out of granite.

The journey from Shanghai to Chungking requires nearly a month, about two and a half weeks being

needed for the inbound journey. The return is made in a week.

This film of a little known territory, with its faithful revelation of the dangerous navigation between narrow gorges, of dodging great rocks below as well as above the water, and with its towering walls

of precipitous mountains in the background, as well as its portrayal of the everyday life of a people removed from the ordinary paths of travel, will have great interest for educators. The picture should be a "natural" for the sessions of the Hollywood Forum at some future date.

## KODACHROMING IN AIR DESCRIBED BY EXPERT

**K**ODACHROMING from the air over an interesting spot will give the personal filer a great thrill if his pictures have been made with a little forethought. A two seater open monoplane is ideal, but any plane with sliding windows will do.

A day when the atmosphere is clear can be selected if the location can be viewed from a hill or high building. When detail can be seen for a distance of ten or twelve miles and the horizon is clear or after rain is ideal if the sky is clear and the sun shining.

If you intend using 100 feet or more film have a new spool ready in the camera and your exposure meter handy, as valuable time is wasted changing spools in the air and the minutes pass at an expensive rate in a plane.

Shoot a few feet of action outside the hangars before you go aloft, such as a plane coming to rest and one being started. If your lens has not a fixed focus set it at infinity and fix it securely with adhesive tape. Then securely fix a Kodachrome haze filter.

Explain to your pilot before you take off that the best possible position for filming will be when the plane is in a direct line between the sun and

the objects to be photographed. Flat lighting is the best in the air just as it is on the ground.

As soon as you are in the air get your exposure meter to work and point it straight down. You will be surprised at the small aperture you will have to use, but believe your meter. No good light meter is tricked by a sudden change of light conditions if you use it as its maker suggests. At about 2000 feet you can begin to shoot. Wedge your body into the seat and hold your viewfinder to the eye, pointing the camera downward as much as possible, as the horizon does not look as well on the screen as it does when you view it from a plane.

If you are wedged in tightly your body will act as a buffer for some of the engine vibrations.

After each shot wind the camera, the noise of the engines together with the rush of air will deaden the familiar sound of film running through your camera. If you are fortunate enough to have a multi-speed camera, shoot every scene at 64 frames a second. This will have the effect of ironing out most of the bumps.

JAMES A. SHERLOCK, S.A.C.  
Sydney, Australia.

# A. S. C. MEMBERS ON PARADE

(Continued from Page 461)

John reported gradually lessening of flood dangers due to the activity of the government in building dams for the small tributaries. In the past flood assignments have constituted some of the tougher work of newsreel men—frequently really hazardous.

The visitor returned to Cleveland by air October 21, ready for the approaching football season. He said in this kind of work there was increasing use of the lighter and more mobile cameras. The major sound cameras weigh 120 pounds against the 45 or 50 pounds of the silent.

In Florida early in the year the A. S. C. man had abundant opportunity to get acquainted with Dizzy Dean. His admiration for the baseball player is so pronounced you never are in doubt as to his regard for him. Dizzy is a swell fellow to work with, as the cameraman describes him.

"There's nothing dizzy about him," he insisted. "The man really is smart, and so is Mrs. Dizzy, too."

The cameraman estimates that each year a newsman without headquarters working on general assignments, exposes film in perhaps fifteen or twenty states. In the past year he has worked possibly in excess of that number.

In Houston, Texas, three weeks ago he served as best man for his brother, Cornelius L., when he was married to Miss Ina Boyd, an M.D. As John's sister is an attorney he now "points with pride" to the fact he has in the family a doctor and a lawyer. And that, by the way, ought to constitute news in any man's family.

When it was confidentially suggested by the reporter to Mrs. Herriman that this big-framed man of hers seemed heavier than he was five years ago she raised her hands.

"I don't know what to do with him," she said in a despair that didn't seem entirely of the mock variety. "When we were married twelve years ago he weighed 150 pounds. Now he is up to 224. But he tells me he doesn't eat much. And really I don't think he does."

father of a boy in mid-October. Congratulations.

• Warren Lynch, A.S.C., is announced as a coming bridegroom. The bride will be Marjorie Jean Reynolds, a Los Angeles girl, niece of former Governor Stevens of California.

• Karl Freund, A.S.C., is now in Europe on a vacation, joining Mrs. Freund, who has been abroad all summer.

• Gordon Pollock, A.S.C., we are glad to say, is improving from his severe injuries resulting from an automobile collision. It is believed he soon will be able to be removed from the Good Samaritan Hospital, where he was taken with a broken arm, broken jaw and other injuries. He was thrown free from the automobile in which he was riding following its collision with a truck on Roosevelt Highway.

• Georges Benoit, A.S.C., writing on shipboard crossing the Mediterranean, casually mentions at the moment three French planes are hovering low over El Nil, the craft on which he is sailing. The airships are a part of the squadron keeping close tabs on all shipping in the big sea, a supervision having its causes in the Spanish revolution.

The A.S.C.'s public relations committee man for Paris is on his way to Egypt, in which country he will photograph a picture for the Abdel Wahab company of Cairo and which Mohammed Karim will direct. It is a return of his engagement of last summer. The subject will be in Arabic, and as the cinematographer does not speak the language he is under the impression it will be an experience.

The letter mentions that a couple of months ago the writer had the pleasure to meet in Paris John W. Boyle, A.S.C., and intimates his belief somewhere in the United States there are snapshots which include in their subjects also Georges Carpentier, who seems to have been the third member of an interesting party in Paris. A peek at the photos would be appreciated.

Mr. Benoit is due to be back in Paris by November 10, on which date he is slated to start cameras on "A la Page," to be made by the C. I. C. company. Gerard Sandoz will direct the subject under the supervision of Yves Mirande, one of the ranking French authors.

The quality of French productions distinctly is improving, it is reported, the enhancement in value having been noticeable for the last year. No longer is there any attempt to make pictures in twelve or fifteen days' shooting, the producers realizing that such a shortening of schedules materially lessens the chances of the picture being successful.

Our correspondent extends his congratulations to the man selected to supervise the photography on Danielle Darrieux, the French star now in Hollywood. He said he had the pleasure of photographing her in one picture, and that the one chosen to photograph her will have an easy job. He describes her as young, beautiful and easy to photograph.

Edwin L. Dyer, A.S.C., has joined the ranks of A.S.C. members who are directors. In the past few months Ed has directed and photographed three industrial films for Jam Handy Productions. They say he's doing right well at this dual assignment, clipping off his schedules lots of time formerly spent in explaining and arguing things with the director. More power to you, Edwin, we're for you!

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- Gregg Toland, A.S.C., became the

# JAPAN'S YEAR BOOK IS WORTHY PUBLICATION

**W**ITH the compliments of the consulate of Japan the American Society of Cinematographers has been presented with a copy of "The Cinema Year Book of Japan: 1936-1937." It is a de luxe volume of about 200 pages 9 by 12 inches in size and printed in Tokyo by the Sanseido Company Ltd. Its publisher is the International Cinema Association of Japan.

The editors are Tadash Iisima, Akira Iwasaki and Kiso Uchida. Their work is mainly in English, and it is done with a precision and quality that would command praise for a parallel volume printed in New York or London's best printshops.

The Cinema Year Book has been compiled as a first preparation in that connection, the writer declares, and to show to foreign countries all the phases of the Japanese motion picture industry.

#### Industry Began in 1906

Sixty pages are in illustrations of players and in scenes from pictures. In photography and in engraving they will rank with the best. So, too, they will in composition layout.

The first chapter of the Japanese motion picture industry opened in 1896, when Edison's Vitascope and Lumiere's Cinematograph were introduced in the country. They reached Japan within the year of the announcement of their invention.

In 1904 the first motion picture studio was founded in Tokyo, and in 1905 there was a second one in Kyoto. In 1912 the Nikkatsu was organized. The industry was making long strides quickened by the flush following the Russo-Japanese war.

The second chapter began with the World War, which brought about a revolution in all Japanese industries and as a result lifted the people's standard of living. New production companies came into being. The people called for more and better pictures. By 1920 the screen had become the fundamental form of public amusement.

Where prior to this time the Japanese cinema had depended upon the European example it now, due to the depression in the amusement field of the latter, shifted to the rapidly rising American industry. A new vista opened. Young intellectuals began to take keen interest in the art of the screen.

The earthquake in 1923 created

havoc for a long time. The book traces the rise of the industry from the disaster and its progress through the close of the silent era and the beginning and development of the sound.

There are many special articles and synopses of more popular films as well as statistics of the industry. In 1936 there were 513 pictures produced in Japan by 3500 studio workers. The total personnel is estimated at 50,000 of which three-fifths are in theaters.

Ten of the principal production companies are capitalized at over 50 million yen. The number of theaters in the country is over 1600.

## 'Photographic Amusements' Leads Ten Predecessors

**T**HE American Photographic Publishing Company of Boston has issued "Photographic Amusements," including tricks and unusual or novel effects obtainable with the camera, by Frank R. Fraprie and Florence C. O'Connor. It is in its eleventh edition and has been revised and enlarged.

Incidentally it may be of interest to note the first edition was issued forty years ago. Of the 247 pages in the text the final 18 are of ways in which to do tricks in amateur motion pictures. In volume and content the book tops any of its immediate predecessors, particularly in its marked attention to photographic reproductions.

Ninety-five subjects are devoted to informing the amateur photographer how to do things out of the usual, a few of them retained from the first edition. An insight into the variety of things that are taught the photographer may be gathered from the leading ten in the list of contents:

"It's Done with Mirrors," "Reflections and Distortographs," "Freaks—Mask in Bellows Method," "Seeing Double—Lens Cap Method," "Box Method," "Sliding Panel Method," "Card in Front of Lens Method," "Enlarging Method," "Multiple Exposures" and "Duplicators and Tripli-cators."

In the chapter devoted to motion pictures the authors suggest that most amateurs with movie cameras make pictures for two purposes: records of their friends and families and for entertainment. Point is made of the fact that pictures of the family designed for a permanent record will be more entertaining if they are livened up and made interesting.

While there are many things the photographer may do with but one speed in his camera there are many more that may be done with speeds of eight, sixteen and about sixty frames a second. Also necessary is the attachment providing for stop motion.

Eight methods are named as comprising the list covering the making of trick illusions: Stop motion, abnormal speed of film in camera, telephoto, double exposure, reverse motion, masks, specially constructed trick properties and laboratory trick work.

The book then goes into this list in detail, a chapter that probably will be read with much interest by the amateur and in the great majority of cases undoubtedly with profit. In its editing and its typography the volume is a credit to its publishers.

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## Photographic Annual Will Aid Progressive Camerist

**E**DITED by Frank B. Fraprie, editor of American Photography, Volume 52 of the American Annual of Photography, 1938, has been received from the American Photographic Publishing Company of Boston.

There are 96 full pages of illustrations, 226 of illustrated text and 50 pages of advertising. The volume is of goodly dimensions, about 7 by 10 inches. The book is finely printed. The price is \$1.50 paper and \$2.25 cloth.

Twenty-two special articles constitute the text. One of these, by Nicholas Haz, will have special interest for cinematographers. It is around the life and work of Karl Struss, who in 1908 as a lad became a pupil of Clarence K. White, with whom he remained four years. The chapter is entitled "From Salons to Screens," point being made of the fact its subject was a portrait photographer before entering upon work in films.

The titles of some of the chapters will indicate the breadth of the volume in its photographic range: "While the Sun Is in the West," "Technique of the Exposure Meter," "Photography of Trees," "Preparation of Minicam Slides for Projection," "Reptiles as Photographic Subjects," "Mystery of Photographic Developers," "Weather and Mountain Photography," "The H and D Curve: How to Make and How to Use It," "Experiences of a Photo-Journalist" and "The Use of the Range Finder in Photography."

These are ten out of the twenty-two, but they will give an idea of the others. At the end of the volume are "Who's Who in Pictorial Photography 1936-7," "American Amateur Photographic Societies," and "American Annual Formulary."

It is a book the progressive photographer can ill afford to be without.

### Story of a Girl and Dog (A Script)

(Continued from Page 477)

Father is contentedly reading his paper. Mother gets up and goes out.

Scene 56—Long shot in back yard. Mother is bringing in the laundry. One piece drops, but as her arms are full she goes on, and into house.

Scene 57—Medium long shot of back door. Mother comes out, suddenly stops.

Scene 58—Reverse angle, looking

down past Mother. Dog comes up proudly carrying the dropped piece.

Scene 59—Close-up of Mother. She smiles.

Scene 60—Close-up of chops inside ice box. Mother's hand takes one; there is only one chop left.

Scene 61—Close shot of Dog eating chop. Fade Out.

Scene 62—Insert, close-up of clock, pointing to 6 o'clock.

Scene 63—Long shot of living room. Mother looks in at door, speaking.

Title—"Supper in a few minutes!"

Scene 64—Close shot, Mother's feet approaching icebox.

Scene 65—Close shot, icebox door swinging open.

Scene 66—Close-up of plate with one solitary chop.

Scene 67—Close-up of Mother's

face, discovering loss. She turns and exits toward living-room.

Scene 68—Medium-shot of Motner in living-room door, obviously asking who stole her chops.

Scene 69—Close-up of Mother, speaking.

Title—" . . . I ordered four chops—now there is one!"

Scene 70—Close-up of Jane, looking very uneasy.

Scene 71—Close-up of Father, also looking guilty.

Scene 72—Long shot showing both Father and Jane. Both start to speak at once.

Title—"I . . . you see . . . he was so hungry—"

Scene 73—Same as Scene 72. Father and Jane stop, and look at each other.

Scene 74—Close-up of Dog, barking.

Scenes 75, 76, 77—Three very quick close-ups of Father, Jane and Mother, all registering surprise and looking at something in middle of room.

Scene 78—Medium-shot of Dog, standing in middle of room, wagging his tail.

Scene 79—Same as Scene 72. Father and Jane again start to speak together.

Title—"I only took one chop—there must be enough for us!"

Scene 80—Long shot of Mother, shooting past Father, Jane and Dog in foreground. Mother sees the point and slowly smiles.

Title—"After this, we'll look before we feed you, Fido!"

Scene 81—Long-shot, reverse angle. Jane rushes forward to Dog. Mother and Father exchange smiles over her head.

Scene 82—Close-up of can opener opening a can of beans.

Scene 83—Close-up of Dog eating the last chop, tail wagging. Fade Out.

Title—The End.

This scenario is of course intended as a framework upon which to build with the people and other facilities you have available. You can easily write in parts for neighbors and friends as you wish. Since many of the closer scenes will be more effective if held to short flashes, it can be filmed in much less footage than its 88 script scenes would indicate. Incidentally, if your production budget vetoes such a lavish expenditure of lamb-chops on the dog, remember that you can make all the inserts at one time, with one chop, and get the various scenes of the dog eating the chops with but one chop, by varying the camera angles. Lastly, unless your dog star is unusually fond of water be sure you make the shots of the bath long shots!

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**Here's The Answer**

(Continued from Page 476)

If you want a colored background, choose plain, unpattered cloth that harmonizes pleasingly with the costume of the doll being photographed. In general, choose a background that will not distract attention from the subject.

5. Your  $12\frac{1}{2}$ mm. lens focused at 2 feet will cover a field approximately 9 inches wide by  $7\frac{1}{2}$  inches high. You can easily figure out for yourself the field covered at any focal setting by remembering that your  $12\frac{1}{2}$ mm. lens covers a horizontal angle of 19.7 degrees and a vertical angle of 14.8 degrees.

I do not at the moment have a hyperfocal chart for your f:1.9  $12\frac{1}{2}$ mm. lens, so I have figured the depth of focus on the basis of an f:1.8 lens of the same focal length, which will give an approximately accurate result.

Focusing at 2 feet, your near limit of sharpness will be approximately 1.6 feet; your far limit of sharpness will be approximately 2.4 feet. You can calculate this for any stop or focal setting using the following formula: Let  $h$  equal the hyperfocal distance, and  $d$  equal the distance focused upon.

$$h \times d$$

then  $\frac{h \times d}{h + d}$  = near sharp limit.

$$h + d$$

$$h \times d$$

and  $\frac{h \times d}{h - d}$  = far sharp limit.

$$h - d$$

The hyperfocal distances for a  $12\frac{1}{2}$ mm. lens at different stops are: f:1.8,  $11\frac{1}{4}$ ; f:2, 10; f:2.5, 8; f:2.7,  $7\frac{1}{2}$ ; f:3.5, 5%; f:4, 5; f:4.5, 4%; f:5.6, 3%; f:6.3, 3%; f:8, 2%; f:11, 1%.

6. It is quite practical to use a supplementary lens to get still closer to show more detail. If for instance you have a Cine Kodak tilter, you can use this, folding the title-card easel out of the way.

Or you can make a similar device using a good spectacle lens of the desired power, as described in this department in the April, 1937, issue (P. 168). Offhand I would estimate that a 1.5 dioptre lens would give you a full-screen image of your doll, while more powerful lenses would give you smaller fields.

Using a device of this type would simplify the problem of parallax—that is, the difference in the angle covered by the finder and the camera lens, which are several inches apart.

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In a special performance the National Educational Film Bureau (Reichsstelle fuer den Unterrichtsfilm) showed pictures of bullets striking an armor plate taken at the rate of 250,000 exposures a second. This is a great advance as compared with the last performance given by the Reichsstelle before representatives of the press in the fall of 1936, when a shooting frequency of 80,000 exposures a second was demonstrated. Details of the method and apparatus used are considered a military secret. It was learned, however, that the exposures are made by using a series of electric sparks with a stationary photographic plate rather than with film.

In a personal interview Dr. Schardin, professor at the Technical High School, Berlin, who has led in the development of the method used, stated that he is now working on frequencies of nearly 1,000,000 a second and that it is theoretically possible to increase the frequency up to 5 to 10 million exposures a second.

One of the chief difficulties encountered is in finding anything to photograph which moves fast enough to make use of such high frequencies.

WILLIAM STULL, A.S.C.

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